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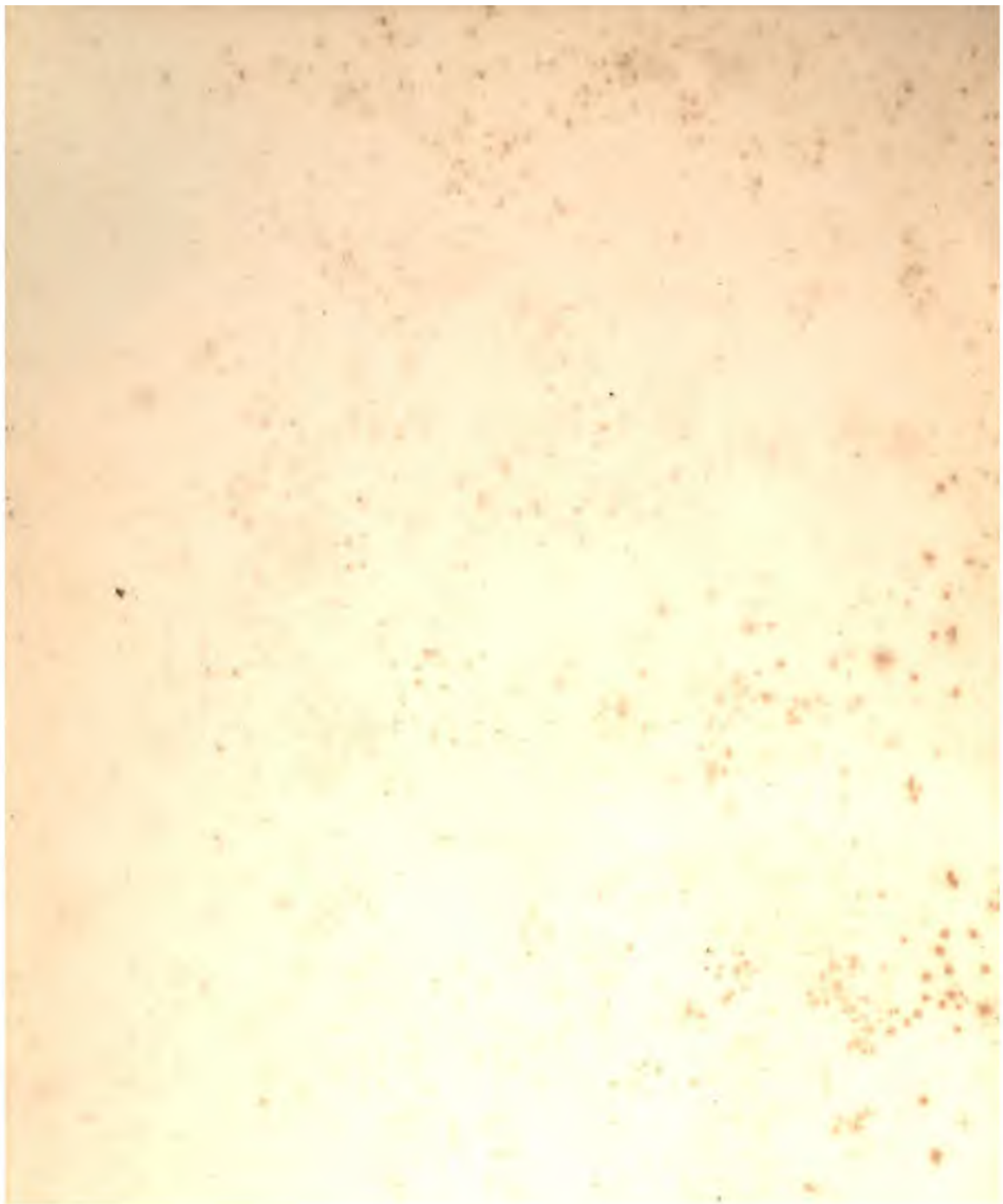
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THE BOOK OF THE HOME

AN · ENCYCLOPÆDIA · OF ALL · MATTERS · RELATING TO · THE · HOUSE · AND HOUSEHOLD · MANAGEMENT



THE BOOK OF THE HOME



4 vols





The Book of the Home

An Encyclopaedia of all Matters relating to the House and Household Management

Produced under the General Editorship of

H. C. DAVIDSON

Assisted by

OVER ONE HUNDRED SPECIALISTS

With Coloured Plates and Numerous Illustrations

Volume I

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PREFATORY NOTE.

The Book of the Home is intended to form a complete work of reference on all subjects connected with household management. No efforts have been spared to ensure that every matter bearing upon the Home and Home Life shall receive full and sufficient treatment, and that the information given shall be reliable and in the best sense of the phrase up-to-date.

With this object in view each section has been entrusted to a writer whose special knowledge of the subject has been amply proved by former work. The hundred and more contributors are all specialists entitled to speak with the highest authority on their several subjects.

The contents of *The Book of the Home* may be grouped under four principal heads. The first deals with the House, and everything appertaining to it; the second with the everyday routine of the Household; the third with out-door duties, occupations and amusements, including social relations and the subject of dress; while the fourth gives sound systematic and practical counsel on the management of children from their earliest infancy to the time when they are started in life on their own account.

It is hoped that *The Book of the Home* will prove an indispensable ally to the young bride and the novice in household management, as well as an invaluable work of reference to the more experienced.

The Editor takes this opportunity of thanking the contributors, literary and artistic, who have so efficiently seconded his efforts to ensure the completeness and accuracy of the work.



CONTENTS.

VOLUME I.

THE CHOICE OF A HOUSE.

Page

INTRODUCTORY. Country and Town Houses—Suburban Houses—Detached and Semi-detached Houses—Flats—Newly-built Houses - - - - - - - 1

SITUATION. Soil — Elevation — Aspect — Surroundings — Importance of Nice Neighbours - - - - - - - - - - - - - - - - - - 3

SANITARY CONSIDERATIONS. Sanitary Conditions — Cess-pools — Tests for Leaking Drains — Sanitary Report — Water-supply—Cisterns—Wells—Comfort of Rooms - - - - - - - - - - - - - - - - - - 7

THE CONDITION OF THE PREMISES. Preliminary Examination—Walls and Ceilings — Floors — Doors — Windows — Grates — Miscellaneous — Ventilation — State of the Garden - - - - - - - - - - - - - - - - 12

THE LAW OF LANDLORD AND TENANT.

I. IN ENGLAND.

DIFFERENT KINDS OF TENANCY. Tenancy at Will—Tenancy at Sufferance—Tenancy for a Term—Tenancy from Year to Year - - - - - - - 16

THE LEASE. The Seven Parts of a Lease - - - - - - - - - - 17

WHO MAY GRANT VALID LEASES. Infants and Guardians — Married Women — Limited Owners—Mortgagors and Mortgagees - - - - - - 18

FORMS OF LEASE OF DWELLING-HOUSE - - - - - - - - - 20

REPAIR AND MAINTENANCE. Waste—Tenant's Liability to Repair—Covenant to Insure—Covenants to Repair - - - - - - - - - - - 21

LANDLORD'S RIGHT TO DISTRESS. Time for Levying Distress—Arrears Recoverable by Distress—Things Privileged from Distress—Where the Distress must be Made—The Mode of the Distress—Sale of Property Taken—Remedies for Unlawful Distress—Security for Rent—Agents and Receivers of Rent—Bankruptcy of Tenant—Distress for Rent a Waiver of Landlord's Right of Re-entry—Expenses allowed for Distress—Landlord's Claim when Tenant's Goods taken for Debt - - - - - - - - - - - - - - - - 24

FIXTURES. Time for Removal of Fixtures—Fixtures in Case of Express Stipulation - 31

COVENANT TO PAY RENT - - - - - - - - - - - - - - 33

RATES AND TAXES. Tenant's Taxes in the Absence of Stipulations—Payment of Rates by Outgoing or Incoming Occupier—Landlord's Taxes in the Absence of Stipulation—Rates and Taxes in Case of Express Stipulation - - - - - 34

Page

SUB-LETTING. Payment of Ground-rent by Sub-tenant - - - - - - 37

GOOD TITLE AND QUIET ENJOYMENT - - - - - - - - - 38

DETERMINATION OF TENANCIES. By Notice of the Parties—Termination by Surrender—By Forfeiture—Tenants Quitting during their Term - - - 38

LANDLORD'S LIABILITY FOR CONDITION OF FURNISHED HOUSE - 41

LETTING INFECTED HOUSES OR LODGINGS - - - - - - - 41

RIGHTS OF LODGERS - - - - - - - - - - - - - - 42

II. IN SCOTLAND.

THE LEASE - - - - - - - - - - - - - - - - - 43

WHO MAY GRANT VALID LEASES. Granter's Title—Effect of a Bond—Married Women—Pupils—Minors—Trustees—Entailed Estates—Life-renter—Heritable Creditor - - - - - - - - - - - - - - - - 43

HOW A LEASE IS CONSTITUTED. The Foundation of a Lease—Stamping - 44

FORM OF LEASE OF DWELLING-HOUSE - - - - - - - - - 45

SUB-LETTING AND ASSIGNING. Furnished Houses - - - - - - 46

TENANT'S RIGHTS UNDER A LEASE. Possession—Accidental Injury or Destruction—Injury by Fire—Insurance - - - - - - - - - - 46

TENANT'S OBLIGATIONS. The Tenant's Obligation to Take and Retain Possession—Payment of Rent—Management - - - - - - - - - 48

REPAIRS - - - - - - - - - - - - - - - - - - 49

FURNISHED HOUSES - - - - - - - - - - - - - - - 49

FIXTURES. Right to remove Fixtures - - - - - - - - - - 50

LANDLORD'S REMEDIES FOR RECOVERY OF RENT. Summary Diligence—Action of Maills and Duties—Hypothec—Duration of Hypothec—Superior's Hypothec—Landlord's Right to retain Tenant's Furniture—Sequestration for Rent—Mode of Sequestration—Landlord's Right in Competition with Other Creditors - - - - - - - - - - - - - - - - - 50

ENTRY. Date of Entry - - - - - - - - - - - - - - 53

BREAKS IN LEASE - - - - - - - - - - - - - - - 54

REMOVING. Warning to Remove—Notice by Tenant—Tacit Relocation - - 54

RATES AND TAXES - - - - - - - - - - - - - - - 55

STAMP-DUTIES ON LEASES - - - - - - - - - - - - 55

DECORATION OF THE HOUSE.

CHOICE OF A COLOUR SCHEME. Gradation of Colours—Properties of Colours—Harmony of Colours—Drawing-room Colour Scheme—Dining-room Colour Scheme—Library Colour Scheme—Hall and Staircase Colour Scheme—General Advice on Colouring - - - - - - - - - - - - - - - 57

AN ALTERNATIVE COLOUR SCHEME. Drawing-room Colour Scheme—Dining-room Colour Scheme—The Hall Colour Scheme—Library Colour Scheme—Bedroom Colour Scheme—Nursery Colour Schemes - - - - - - - 60

PROFESSIONAL AND AMATEUR DECORATING COMPARED - - - 64

PAINTING. Preparing the Wood—Cleaning Old Work—Removing Old Paint—Applying Paint—Enamel Paint and Porceleine - - - - - - - - 67

Page

WHITEWASHING AND DISTEMPERING. Ingredients—Implements—Preparations—Whitewash—Distemper—To Remove the Old Whitewash—To Stop Cracks—An Uneven Ceiling—Two Operators or One—Method of Application—Limewash - - - - - - - - - - - - - - - - 70

WALL COVERINGS. Whitewash—Oil Paint—Paper—Plain Papers—Patterned Papers—Sanitary—Wash Printing—Various Patterned Papers—Stencilled Papers—Appropriateness of Papers—The Various Rooms—Relief Decorations—Hangings and Fabrics—Arrangements and Accessories—Hanging and Fixing - 73

STAINING OR PAINTING FLOORS. Staining Fluids—Preparing the Floor—Applying the Stain—Re-staining—Floor Painting - - - - - - - - 82

ARTISTIC DECORATION OF UGLY SURFACES. To Hide an Ugly Mantelpiece—To Hide an Ugly Hearth—To Hide a Gilt Overmantel—A Substitute for an Overmantel—Cretonne Hangings for Walls—Leather Panels for Walls—Matting for Walls—Decoration of Door Panels—Decoration of Bath-room Walls—Artistic Floorings—Wall Decoration—Ceiling Decoration - - - - - 85

FURNISHING THE HOUSE.

ESTIMATES OF COST - - - - - - - - - - - - - - - 94

THE HIRE SYSTEM - - - - - - - - - - - - - - - 99

SECOND-HAND FURNITURE. Auction Sales—Second-hand Shops—Bogus Sales 101

FURNITURE REMOVALS. Sorting the Furniture—Preliminary Arrangements—Practised Removers Best—Packing Choice Things—Packing Carpets and Curtains—Procedure on Arrival of Furniture—Prices - - - - - - - 103

FLOOR-COVERINGS. Ancient Floorings—Colour—Turkey Carpets—Brussels Carpets—Wilton Carpets—Tapestry—Axminster Carpets—Central Squares—Stair Carpets—Kidderminster Carpets—Carpets under Beds—Castor Grooves—Felt Carpets—Dutch Carpets—Tests of Quality—Under-coverings—Floor-coverings for Halls—Cocoa-nut Matting—Staining—Druggets—Mats—Cost - - 106

THE HALL. A Passage Hall—A Small Square Hall—An Old-fashioned Hall—Extension of Halls - - - - - - - - - - - - - - - 116

SUGGESTIONS FOR HALLS. 1. For a Long, Narrow Corridor Hall, with Wooden or Plaster Arch dividing Front and Back Sections—4. For a Square Hall—6. For Irregular-shaped Hall in a Modern House - - - - - - - - 122

STAIRCASES AND LANDINGS. A Staircase Opposite the Front Door—A Small Landing—A Darker Staircase and Landing—A Broad Staircase and Landing—Stone Staircases—A Long Corridor—Square Half-landing—Stair Carpets—Wall-papers for Staircases - - - - - - - - - - - - 122

SUGGESTIONS FOR STAIRCASES. 1. For a Dark Staircase—2. For a Light Staircase—3. For a Light Staircase shaded by Stained-glass Windows—4. For Staircase with Indian Ornaments - - - - - - - - - - - - - - 128

DINING-ROOM FURNITURE. Oak Furniture for Dining-room—Chippendale Dining-room Furniture—Dining-room Chairs—Sideboards—Dining-tables—Cheap Dining-room Schemes—Arrangement of the Dining-room - - - - 129

SUGGESTIONS FOR DINING-ROOMS. 1. With Brown Oak Furniture—2. With Oak or Mahogany Furniture—3. With Walnut or Mahogany Furniture—4. With Old Oak Furniture—5. With Mahogany Furniture, Sheraton style—6. With Walnut or Dark Oak Furniture - - - - - - - - - - - - - - 136

Page

DRAWING-ROOM FURNITURE. A Striking Drawing-room—An Old-fashioned Drawing-room—An Inexpensive Drawing-room—A Chippendale Drawing-room—A Well-lighted Drawing-room—Drawing-room Papers—Drawing-room Carpet—Blinds—Drawing-room Curtains—Drawing-room Chairs—Tea-tables—Drawing-room Cabinets—Overmantels—Pianos—Drawing-room Couches - - - 136

SUGGESTIONS FOR DRAWING-ROOMS. 1. For a South or West Room—2. For a South or West Room not so light as No. 1—3. For a North or East Room—4. For a North or East Room with plenty of light—5. For a small, dark Room—6. For a very Inexpensive Room, rather dark - - - - - - - - 150

THE BREAKFAST-ROOM. A Bright Breakfast-room—The Fireplace—Carpets—Curtains—Window-seat—Furniture—Decorative Effects - - - - - 151

SUGGESTIONS FOR BREAKFAST-ROOMS. 1. For a Room with a very Sunny Aspect—2. For a Room with rather a Dull Aspect.—3. For a Well-lighted but not very Sunny Room - - - - - - - - - - - - - - 154

THE LIBRARY OR STUDY. Library Furniture—The Bookcases—The Writing-table—Wall Decorations and Oddments—Carpet and Curtains—Heat and Light—A Larger Library - - - - - - - - - - - - - - - 154

BEDROOM FURNITURE AND DECORATION. An Ideal Bedroom—Bedroom Papers—Bedroom Floor-covering—Bedroom Curtains—Bedsteads and Bedding—Bedroom Furniture—Toilet-ware—Finishing Touches - - - - - - 159

SUGGESTIONS FOR BEDROOMS. 1. For a very Sunny Room—2. With Walnut Furniture—3. For a Room with a North or North-east Aspect—4. For a well-lighted Cold Room—5. For a small Snug Room—6. For a Room with Stained Green Furniture - - - - - - - - - - - - - - - 168

THE BATH-ROOM. Heating and Ventilating — Floor-covering — Decoration — Furniture—Bath Rugs and Mats—Bath-room Details - - - - - - 169

SUGGESTIONS FOR BATH-ROOMS - - - - - - - - - - - - 170

THE KITCHEN. Kitchen Furniture—Floor-covering—Kitchen Fender—Kitchen Clock, Curtains, and Sundries—Kitchen Utensils and Requisites—Sauce-pans—Kettles — Boiling-pot — Preserving-kettle — Fish-kettles — Frying Baskets and Pans—Mincing-machine — Wire Meat-covers — Butter Prints and Cups — Kitchen Crockery and Cutlery—Irons—Kitchen Brooms and Brushes—Kitchen Lamps - - - - - - - - - - - - - - - - - 171

THE PANTRY. Fittings — Storage of Plate — Cellar — Glass Closet — Pantry Register—Cleanliness - - - - - - - - - - - - - - 177

SILVER. Choice of Silver — Silver, to clean — Plate-powders — Silver Ornaments, to clean—Stains, to remove—Plate, to store - - - - - - - 178

GLASS AND CHINA. Hints on Choosing—China, to harden—China, to wash—China Cement—Glass, to wash—Glass, to remove stains from—Glass, to mend—Stoppers, to loosen - - - - - - - - - - - - - - - 179

TABLE CUTLERY. Choosing Cutlery—Handles, stained—Handles, to fasten—Knives, to sharpen—Knives, to clean - - - - - - - - - - - 181

BROOMS AND BRUSHES. Carpet-sweeper — Banister-brushes — Wall-brushes — Curtain-brooms—Furniture-brushes—Dusting Brushes—Plate-brushes—Bottle-brushes—Boot-brushes — Blacklead Brushes — Scrubbing-brushes—Housemaid's Box - - - - - - - - - - - - - - - - - - 182

THE STORE-CUPBOARD - - - - - - - - - - - - - - 185

THE LINEN CUPBOARD. A New Cupboard—Care of Contents—Linen List—Marking Linen—Quantity needed—New Linen from Old—A Small Stock

Page

Best—Origin of Linen—Various Kinds of Linen—Linen Cold, Cotton Warm—Origin of Cotton—Tests of Quality—Cheaper by the Yard—Wear and Repair—Blankets, their Origin—Tests of Quality—Protection from Moths—Perfume Useful - - - - - - - - - - - - - - - - - 187

THE FURNISHING OF FLATS - - - - - - - - - - - - 194

A MODERATE-SIZED FLAT. Dining-room — Drawing-room — Bedrooms — Passage - - - - - - - - - - - - - - - - 195

A SMALL FLAT. Dining-room — Drawing-room — Bedroom — Other Rooms — Flats for Occasional Residents - - - - - - - - - - - - 199

HEATING AND LIGHTING.

HEATING ARRANGEMENTS. Methods of Diffusing Heat - - - - - 204

OPEN FIRES. Advantages and Disadvantages—Common Defects of Grates—How to Light a Fire - - - - - - - - - - - - - - - 204

STOVES. Gas Stoves and Fires—Oil Stoves - - - - - - - - - 207

HOT-WATER PIPES. Hot-water Supply - - - - - - - - - - 212

FIRE ACCIDENTS. Precautions against Fire—Extinguishing Fires—Chimneys on Fire—Cost if Fire-engine comes—Fire Insurance - - - - - - - 214

LIGHTING. Methods of Lighting—Relative Cost—Lamps and Ceilings—Accessories - - - - - - - - - - - - - - - - - - 216

GAS. Advantages—Quality—Leakages—To Stop a Leak—Waste of Gas—Meters—Wet and Dry Meters—Jumping Lights—Gas Fittings—Burners and Economy - - - - - - - - - - - - - - - - - - 217

THE INCANDESCENT LIGHT. Mantles—Useful Hints - - - - - - 223

LAMPS. Spirit Lamps — Colza Lamps — Petroleum Lamps — Precautions — Choice of Lamps—Care of Lamps—Lamp Accidents, Prevention of—Lamp Oil—Illumination - - - - - - - - - - - - - - - - 224

ELECTRICITY. Means of Obtaining — Fitting up — Electric Measurement—Cost from the Main - - - - - - - - - - - - - - - 229

ACETYLENE - - - - - - - - - - - - - - - - - - 231

DRAPERIES AND HOME UPHOLSTERY.

CURTAINS AND DRAPERIES. Choice of Materials—Dining-room Curtains—Drawing-room Curtains; Drapery for Straight Window—Curtains for Oriel Windows—Hall and Door Curtains—Bedroom Curtains—Bedstead Curtains—Lace and Muslin Curtains—Sash Curtains—Mantel-board Drapery—Piano-back Drapery—Archway Curtains - - - - - - - - - - - - - 233

Page

BLINDS. Classification—Outside Blinds—Inside Blinds—Materials for Blinds—Care of Blinds - - - - - - - - - - - - - - 249

DRAUGHTS: THEIR CAUSE AND CURE. Draughty Floors—Draughty Doors—Portières—Screens - - - - - - - - - - - - - - 254

HOME UPHOLSTERY. Slips for Curtains and Furniture—A Slip for a Small Chair—An Easy-chair Slip—A Sofa Slip—To Make Cushions—To Make Down Cushions—To Re-upholster Furniture - - - - - - - - - - 258

FINAL DECORATION.

PICTURES. Selection—Original Works—Copies and Reproductions—Framing—Distribution—Picture-hanging—Care of Pictures - - - - - - - - 265

BRIC-À-BRAC. China—Chelsea—Bow—Derby—Plymouth—Liverpool—Worcester—Wedgewood—Doulton—Other English China—Dresden—Sèvres—Oriental—Persian—Arrangement for Ornamentation—Glass - - - - - - - - 272

DECORATING WOODWORK. Varnishing — Staining — French Polishing — Darkening Wood with Ammonia—Gilding—Designs on Woodwork—Inlaying—Artistic Painting on Wood - - - - - - - - - - - - - - 278

DECORATIVE SUGGESTIONS FOR AMATEURS. Painting and Stencilling — Poker-work — Carving — Carpentering — Metal-work — Photography—Embroidery - - - - - - - - - - - - - - - 282

THE DECORATIVE ARRANGEMENT OF PLANTS IN THE HOUSE - 291

PLANTS IN POTS. Pot Plants for the House—The Arrangement of Plants Indoors—Plants on the Landing—Plants for the Fireplace—Climbing Plants Indoors—Receptacles for Pot Plants—Plants for Halls - - - - - - - 291

CUT FLOWERS. Cut Flowers and their Background—Effective Combinations of Cut Flowers—Receptacles for Cut Flowers—Wild Flowers—New Use for Pole-screens—Cut Flowers for the Fireplace—Cut Flowers for the Mantel-shelf—Flowers Grown Specially for the House - - - - - - - - - - 294

SUGGESTED COMBINATIONS OF CUT FLOWERS. Spring—Summer—Autumn—Winter - - - - - - - - - - - - - - - - - 300

THE GARDEN.

PRELIMINARY WORK. Walks—Edging—Laying Out—Shrubberies—Drainage—The Lawn—Paring and Burning—Trenching—Seed-beds—Clearing and Digging—Garden Tools—Appliances—Manures, &c. - - - - - - - - 301

THE VEGETABLE GARDEN. Importance of Vegetable Garden—Succession of Vegetables—Cropping—Culture—Manuring—Hints on Vegetable Culture—Beans, Broad—Beans, French—Beans, Runner—Beet—Broccoli, Cabbage, &c.—Carrots—Cauliflowers—Celery—Cucumber—Endive—Lettuces—Marrows—Onions—Peas—Potatoes—Radishes—Spinach—Tomatoes—Turnips—Asparagus Culture—Sea-kale—Rhubarb - - - - - - - - - - - - - 304

Page

THE FRUIT-GARDEN. Proper Succession of Fruit — Planting Fruit-trees — Mulching — Pruning — Training Fruit-trees — Stocks for Fruit-trees — Root-pruning—Budding and Grafting—Strawberry Culture - - - - - - 309

THE FLOWER-GARDEN. Succession of Flowers—Bedding Plants—Half-hardy Annuals — Hardy Annuals — Biennials — Perennials — Annual Climbers — The Growing of Flowers—Flowers for Shady Places—Flowers for Sunny Places—Useful Plants—Some Less-known Beauties—Flowers for Smoky Atmospheres—Carpet-bedding—A Rockery—Rockery Plants—Bulbs and Tubers—Pinks and Carnations — Roses — Chrysanthemums — Flowering Trees — Perennial Creepers and Climbers - - - - - - - - - - - - - - - - - 317

THE SUBURBAN GARDEN. Flowers in a Smoky Atmosphere—A Garden of Annuals — Permanent Gardens — To Hide Wooden Walls — Wire Arches—Garden Banks—Screens—Evergreens - - - - - - - - - - 325

WINDOW GARDENING. Window Boxes—A Balcony—Soil for Window Boxes —Flowers for Window Boxes—Indoor Gardening - - - - - - - 326

THE GREENHOUSE. Heating — Ventilation — Cuttings — Greenhouse Plants — Cucumbers — Tomatoes — Rhubarb, Forced — Strawberries, Forced — Vines — Plants that require more Heat - - - - - - - - - - - - 328

PITS AND HOT-BEDS. Cold Pits—Hot-beds - - - - - - - - 335

ILLUSTRATIONS.

VOLUME I.

PLATES.

	Page
Modern Dining-room (specially designed by Warings, Ltd., London, W.)	*Frontis.*
Elevation and Plan of House, showing Sanitary Fittings	8
Colour Combinations, Contrasts and Harmonies	57
Decorative Colour Schemes	58
Designs for Relief Decorations	78
Staircase, No. 2 Lindfield Gardens, Hampstead	124
Chippendale Chair-designs	131
Two Views of Drawing-room in Louis XVI. Style	137
Drawing-room: Dining-room	142
Heppelwhite Furniture	146
Sheraton Furniture	158
Morning Room (specially designed by S. J. Waring & Sons, London)	168
Fitted Bedroom: Bedroom Suite	169
Patterns of Silver Spoons and Forks	178
Pottery and Porcelain	272
Examples of Embroidery	289
Methods of Training Fruit-trees	311
Garden Flowers: Annuals	317
Garden Flowers: Perennials	318

	Page
Open Area around Basement, with Ground-layer, Damp-course, &c.	4
Healthy and Unhealthy Sites	5
"Aspect" Compass	6
Section through Wash-down Pedestal Closet	8
Sectional View, showing Pollution of Well by Leakages from Privy-drain, Cess-pool, and Surface of Ground	10
Some Animal and Vegetable Structures found in a Drop of Thames Water	11
Diagram illustrating Technical Terms	13
Cleaning Brush	68
Paint Remover	68
Paint Brushes	69
Paint-pot and Hanger	69
Section of Brush-cleaner	69
Large Flat Brush (for whitewashing)	70
Machinery for Wall-paper Printing	74
Stencilled Fabric (the "Harrogate" Stencil)	76
The "King's College" Wall Decoration	77
Frieze, in Lincrusta-Walton	80
Flat Brushes (for staining)	83
Simple Draping for Mantel-board in Art Serge	85

Page

Chimney-piece cased with Cairene-work - 87
Staircase with Matting Dado - - - 90
Design for Stencil Decoration of a Wall (Frieze, Filling, and Dado) - - 92
Old Chippendale Book-case - - - 101
Section of Brussels Carpet - - - 108
Section of Tapestry Carpet - - - 109
Section of Axminster Carpet - - - 109
Section of Kidderminster, or Scotch, Carpet: two-ply - - - - - - - 110
Suggestion for treatment of Passage Hall - - - - - - - - 117
"Fitment" Seat for Hall - - - - 119
Quaint Accessories for an Old-fashioned Hall - - - - - - - - 120
Suggestion for screening Hall from Staircase - - - - - - - - 123
A Modern Moorish Staircase - - - 125
Suggestion for Decoration of Square Half-landing in Oriental style - - - 127
Modern Dining-room furnished in old Chippendale - - - - - - 131
Design for Sideboard in Sheraton style - 132
Antique Dresser of Plain Oak - - - 133
View of Dining-room, showing Carved Oak Sideboard, "Pull-out" Table, and Chairs. Elizabethan style - - - - - 134
Corner in an Old-fashioned Drawing-room - 139
Corner in a simply-furnished Drawing-room - - - - - - - - 140
Cosy Corners - - - - - - - - 144
Diagram showing principles of comfort and discomfort in chair-designing - - 147
Cabinet with Secretaire; Satin-wood Table, with removable glass top - - - 148
Piano with raised Shelf for Ornaments, and Rail for Drapery - - - - 149
Specimens of Sheraton's Work - - - 151
Hob Basket-grate - - - - - - 152
Library Chairs - - - - - - - 155
Revolving Book-case - - - - - 156
Hanging Book-case - - - - - - 156
Sheraton Writing-table and Chair - - 158
Library Steps - - - - - - - 159
Modern Wooden Bedsteads - - - 163
1. Patent Spring Mattress on Wooden Frame; 2. Woven-wire Mattress on Wooden Frame - - - - - - - - 165
Wash-stand and Writing-desk Fitments for small Bedroom - - - - - 167
Bath and Lavatory Basin in Tile-lined Recess - - - - - - - - 169
Small Round Table, with folding Leaves - 171
Fire-guard - - - - - - - - 172
Upright Coal-hod - - - - - - 172
Kettle, with Well, for Range - - - 175
Kettle, with corrugated bottom, for Gas Stove - - - - - - - - 175

Page

Frying-basket - - - - - - - 175
Mincing-machine - - - - - - - 176
Butter-print - - - - - - - - 176
Knife-sharpener - - - - - - - 181
Kent's Knife-cleaning Machine for three Knives and Carver - - - - - 182
Banister Brush - - - - - - - - 183
"Turk's Head" Brush - - - - - 183
Double-ended Brush for walls and ceilings - 183
Curtain Broom - - - - - - - - 183
Furniture Brushes - - - - - - - 184
Dusting Brush - - - - - - - - 184
Broom for dusting Venetian Blinds, Cornices, or Pictures - - - - - 184
Plate-brush - - - - - - - - 184
Bottle-brush; Decanter-brush - - - 184
Housemaid's Box - - - - - - 185
The Flax-plant (*Linum usitatissimum*) - 190
Linen Fibres, as seen under the microscope 191
Cotton Fibres, as seen under the microscope 191
Capsule of Cotton-plant (*Gossypium herbaceum*) - - - - - - - - 192
Wool Fibres, as seen under the microscope - 193
Plan of a moderate-sized London Flat - 195
Home-made Bench for side of Dining-room Window - - - - - - - - 196
Cupboard Fitment for Dining-room (Fire-place Recess) - - - - - - 196
Home-made Escritoire - - - - - 197
Fitment for Corner of Drawing-room - - 197
Fitment for side of Bedroom - - - 198
Plan of small London Flat - - - 199
Sideboard Fitment for Dining-room of Small Flat - - - - - - - 200
Fitments for Recess in Dining-room, forming Escritoire and Book-case - - 201
Box Ottoman, &c., for Drawing-room of Small Flat - - - - - - - 202
Front View of Teale Fire-grate - - 206
Vertical Section of Teale Fire-grate - - 206
Section of Musgrave's Stove - - - 208
Section of Slow-combustion Stove - - 208
George's "Calorigen" Stove - - - 210
Section of Bond's "Euthermic" Stove - 211
View of Fletcher Gas-stove with Iron Fret Front - - - - - - - - 211
Hot-water Supply: Worm-boiler System - 214
Hot-water Supply: Cylinder System - - 214
Simple Apparatus for Testing Gas-fittings - 218
"Fish-tail" and "Batswing" Burners. Correct shape of flame - - - 219
Index Dials of 5-Light Dry Meter - - 220
Detachable "Pendu" Gas Light - - 221
Gas-burner Fittings - - - - - - 222
Argand Burner - - - - - - - 222
Section of "Fish-tail" Burner - - - 222
The Welsbach Incandescent "C" Burner, with Bye-pass - - - - - - 223

	Page
Lamp Wick-holder, continued into reservoir, and surrounded with wire-gauze	225
Lamp Burner, for two wicks	226
Lamp Burner, for circular wick	226
Hanging Lamp, for large room	227
Acetylene-gas Generator	231
Border for Serge Curtain	235
Embroidered Border for Serge Curtain	235
Drapery for Straight Window	236
Diagram for shaping Curtain	236
Diagram for shaping Curtain Tails	237
Another arrangement of Drapery for Straight Window	237
Simple Drapery for Oriel Window	238
Festooned Drapery for Oriel Window	238
Drapery coiled over Oriel Pole	238
Diagram of Door Curtain	239
Door Curtain	239
Bedstead Curtains—Italian style	240
Usual arrangement of Muslin Window Curtains	241
Other arrangements of Muslin Window Curtains	242
Plan of Curtain Band or Bracket	242
Fanciful arrangement of Window Curtains	243
Simple arrangement of Muslin Curtains (Oriel Window)	244
Curtains and Drapery for Straight Window	244
Diagram for shaping Festoon	244
Sash Curtains	245
Simple Mantel-board Drapery	246
Drapery for Mantel-board, with deep Fringe	246
Drapery for Mantel-board, with Valance	247
Festoon Drapery for Mantel-board	247
Diagrams of Archway Curtains	248
Archway Curtains	249
Shutter Blinds or Jalousies	250
"Helioscene" Blind	251
"Spanish" Blind	251
"Florentine" Blind	252
Spring Box Blind	252
Festoon Blind	253
A Simple Portière	256
Artistic Draught Screens	257
Diagram for cutting Seat of Chair Slip	259
Chair Slip shown in separate parts	259
Easy Chair	260
Diagram of Arm-piece—Easy Chair Slip	261
Diagram of Seat and Back—Easy Chair Slip	261
Corner of Cushion, showing Stitching	263
Two-strand Picture-wire	269
Enlarged Section of Picture-wire	269
Brass Wall Hook, for picture hanging	269
Good and Bad Methods of Picture-hanging	271
Chelsea Marks (1745–1769)	273
Bow Marks (1730–1775)	273
Derby Marks	274
Worcester Marks, used previous to 1780	274
Worcester Marks	275
Dresden Marks	276
Tools for Wood-carving	280
Simple Pattern for Inlaying	281
Shooting-board	281
Studies of the Rose Conventionalized	283
Stencil Design (Peony Flowers and Leaves)—Japanese Style	283
Suggestions for Decorative Treatment of Various Articles—Earthenware jug, wooden basket, &c.	284
Poker-work applied to Overmantel and Fire-place	285
Salver in Copper *Repoussé*	288
Bent-iron-work Bracket and Lamp-stand	288
Towel Cover—Specimen of Cross-Stitch Embroidery	290
Corner Arrangement for Hall or Landing	293
Cut Flowers, &c., in various Receptacles	296
Cut Flowers in various Receptacles	297
Pole Screen utilized for hanging Plant	299
How to lay Land-drains	302
Section of Cutting for Drain refilled	302
Celery Trench	306
Section, showing method of growing Parsnips and Carrots in Heavy Ground	307
Section of Forcing-tub with Manure	308
Method of Planting Fruit-tree	310
Well-shaped pruned Red-Currant Bush	311
Fan Training	312
Horizontal Training	312
Oblique Training	312
Fruit-tree trained as an Espalier	313
Methods of training Cordons	313
Dwarf Tree on Paradise Stock	314
Shield-budding or T-budding	315
Cleft-grafting	315
Dielytra spectabilis; Love-in-a-mist (*Nigella damascena*); Fritillaries; Deep-blue Gentian (*Gentiana acaulis*)	320
A Rockery	321
Layering	322
Correct method of Pruning for Hybrid Perpetual Roses	322
Framework for training Cucumbers	332
Vine properly pruned. Neglected Vine	334

THE CHOICE OF A HOUSE.

Country and Town Houses.—Town, country, and suburbs have each their special advantages and disadvantages as places of permanent residence. These should be carefully studied when the choice of a house is under consideration.

In the country the air is purer and the surroundings are quieter than in the town. Rents, taxes, and wages are lower; milk, butter, eggs, poultry, and vegetables are sometimes, but not always, cheaper. The washing-bill is less, and the labour of house-cleaning lighter than in cities, where the atmosphere is charged with the smoke of many chimneys. There is not the same temptation to spend money when shops are few and theatres not within easy reach. On the other hand, rural life is dull for those who do not care for rural pursuits, and have no particular appreciation of the charms of nature. Country houses are not infrequently damp; they are apt to be bleak in winter; water is often scarce and bad, and drainage defective. Meat is generally more expensive in the country than in towns, because there is little competition among butchers and foreign meat can seldom be procured. Groceries are much dearer at village shops, and are often poor in quality. If the income-earner's occupation is in the city the cost of travelling to and fro may more than counterbalance the advantage of the lower country rent, to say nothing of the wear and tear caused to health by frequent travelling.

Before making an offer for a house in the country enquire carefully the distance from the church, from the nearest doctor, from the post-office and telegraph-office, from the railway-station, from shops, and from a good school. The amount of rates and taxes, and whether they are likely to increase, are other points which should not be neglected.

Though rents are dearer in towns the necessaries of life are generally cheaper. One is more in touch with the world than in the country. In a large town people of all shades of opinion can find congenial companions, and owing to the prevalence of libraries, they need never be at a loss for reading. The chief disadvantage of a crowded neighbourhood is the rent. It is very difficult to get a small cheap house in a nice locality in a town. Then there is the important question of fresh air and exercise. To enjoy a game of golf or cricket, or even a good walk, a journey has generally to be taken by omnibus or train, and this, of course, costs money.

Suburban Houses.—A suburb, being intermediate between town and country, usually shares the advantages and disadvantages of both. Rents

are higher than they are in the latter, and lower than in the former. At the same time, when considering this question, those who have to travel daily to a town must bear in mind the expense of the journey, whether by tram-car, omnibus, or rail. The cost of living depends a good deal upon locality. In suburbs inhabited chiefly by well-to-do people it is apt to be high, but in other districts it is sometimes very low indeed. For the local shops make it their business to cater for the particular class resident in the neighbourhood, and also have to compete with enterprising town firms who find it profitable to serve suburban customers. The competition naturally tends to keep down prices.

In many suburbs there is no lack of social intercourse. Where there are plenty of neighbours, not too exclusive, one can choose one's own friends, and the task is rendered easier by the many opportunities for meeting which exist. There are usually clubs for lawn-tennis, cricket, football, cycling, and golf; while for the musical, glee clubs offer a pleasant way of spending the evening. It is true that around London suburban houses are often small and badly constructed, but they are better in other parts of the country. And the intending tenant who takes the trouble to study the subject carefully beforehand, will generally manage to find what suits him. It is ignorance alone that enables the jerry-builder to thrive.

Detached and Semi-detached Houses.—In selecting a house careful inquiry should always be made about the neighbours next door. If they happen to be a large unruly family, they may cause much annoyance. If they are very musical, the constant practising, easily heard through thin walls, may be more distressing than can be imagined by those who have not been tortured by it. At close quarters people are practically at the mercy of their neighbours; it behoves them to make sure beforehand what they may expect.

The rents of detached and semi-detached houses are, of course, higher than those of houses in a row. The gardens almost invariably attached to the former are another source of expense. People sometimes think the increased rent will be made up by the supply of fruit and vegetables. This idea is usually erroneous. The wages of a gardener and the cost of manure, plants, and implements often make home-produced vegetables more expensive than those bought in a shop.

Flats.—The principal advantage of flats, and the one that has probably rendered them so popular, is that they require fewer servants than does a house. In fact, many people living in small flats dispense with servants altogether, and only have a woman in for a few hours in the morning to do the work. Families that could not do without three or four servants in a house can manage with one or two in a flat.

Flats are popularly supposed to be cheaper than houses, but in good neighbourhoods in London their rents are very high indeed. There are generally "extras" added on to the rent, such as lighting the stairs, key to the little lawn attached to the buildings, tips to the porter, and so on. The extent of these "extras" should be inquired into beforehand.

The fact that there is often no need to go up and down-stairs is a great inducement to many people to take a flat; they should, however, remember that ground and first-floor flats are very dear, the cheaper ones being up a great many flights of stairs. In many of the new mansions where the rents are comparatively low there are no passenger-lifts, and the advantage of not having to go upstairs to the bedroom is quite overweighed by having to climb up and down a hundred steps on going out of or coming into the flat. In the new cheaply-built mansions little attention is paid to the exclusion of neighbours' noise. They are built to return a certain per cent, and it does not pay to construct sound-proof floors, which are costly. People who are irritated by piano-playing should remember this fact. It is becoming the practice to advertise a couple of unfurnished floors in an ordinary house as a "flat" or a "maisonnette", and people are often deluded into long journeys by this means. A real "flat" is, of course, quite a different thing, as it is entirely self-contained.

Newly-built Houses.—Above all, in the choice of a house, avoid one that is only just built. Many deaths and a vast amount of illness have been caused by hurrying to take possession before the walls are thoroughly dry. A good test—though, unfortunately, it can seldom be applied until the question of tenancy has been actually settled—is to light fires, shut windows and doors, and place a few cheap mirrors in the rooms. After some time the mirrors will be dim if damp has been drawn from the walls by the heat. If any articles of steel, such as knives or fire-irons, are left about they will soon become rusty.

SITUATION.

Soil.—There are two requirements without which the most attractive house should be unhesitatingly rejected. It should be well built and situated on healthy soil. If on unwholesome soil, flimsily built, and insanitary in its construction, it will be found a very dear home, be the rent what it may. Though little may be paid to the landlord, a great deal will probably be paid to the doctor. The soil has very great influence on the health of the inhabitants. This is an important matter to bear in mind when contemplating purchase or a long lease. The late Dr. Parkes attributed to emanations from the soil attacks of cholera, dysentery, paroxysmal fevers, typhoid and various forms of remittent fevers; and damp soils are the frequent cause of rheumatism and of diseases of the respiratory organs.

The two principal dangers connected with soils are ground-water and ground-air. In low-lying districts the former often rises to within a foot or two of the surface, and in many other districts it fluctuates very considerably on account of rainfall and other atmospheric conditions. Above the level of the ground-water, the pores of the soil are filled with air, which is often heavily charged with moisture, and with offensive gases from

leaking drains and gas-pipes, from cess-pools, and from decaying vegetable matter. Every rise of ground-water forces this polluted air upwards, and, unless special precautions have been taken, the air is driven into the houses above. In cold weather especially, the same upward movement also occurs in ill-constructed houses,—although on a much smaller scale,—in consequence of the varying pressure of the air within and without the house. Town-houses are particularly liable to pollution with ground-air, as the paving of the adjacent streets and yards is usually made as impervious as possible. The only preventive consists in covering the whole site of a house with an impervious layer of concrete and asphalt, as shown at B and C in fig. 1.

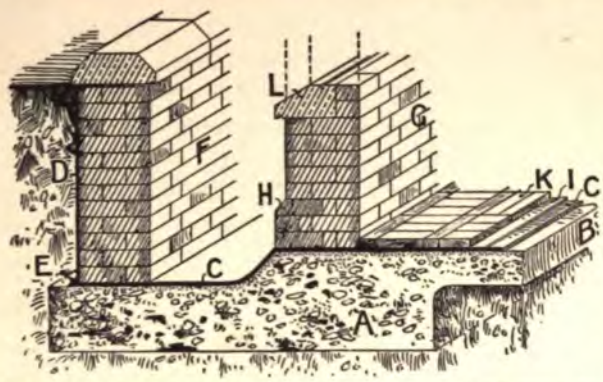


Fig. 1.—Open Area around Basement, with Ground-layer, Damp-course, &c.

A, Concrete foundation; B, concrete ground-layer; C, horizontal asphalt damp-course; D, vertical asphalt damp-course[1]; E, asphalt joint[1]; F, area wall; G, house-wall; H, brick plinth; I, mastic for wood blocks; K, wood-block flooring; L, stone window-sill.

[1] May be omitted without much disadvantage.

"Made earth", as it is called, is much to be dreaded as a soil on which to build human habitations. It is "made" by filling up hollow places with rubbish—often the decaying refuse of dust-bins. Such refuse contains a large amount of organic matter, during the slow putrefaction of which noxious gases are generated, and as gases of all kinds readily find their way through the soil, they are soon driven up into the house that stands over them. Rubbish should be exposed for at least two or three years to the air and sunlight before it is in any way safe to build upon. It is an unfortunate fact that sometimes good material, such as sand or gravel, has been dug out and sold, the space that it occupied being filled with rubbish, and on this foundation houses have been built, the tenants believing themselves to be living on gravel soil.

After "made earth" the worst soil is stiff clay, because it retains and holds so much water that it is always damp. Professor De Chaumont says, "perhaps the worst combination is a shallow layer of gravel or sand, with stiff clay beneath"; the reason, of course, being that the water drains through the pervious gravel and is retained in the impervious clay. A pervious soil, such as gravel, chalk, or sand, if of sufficient depth, is the best on which to build (fig. 2).

The dangers to health from living on damp or undrained land are sometimes not fully realized. Many people think that rheumatism is the chief, if not the only, evil to be feared from damp, but it is merely one, and by no means the worst. It has been most conclusively proved, both in

England and America, that phthisis, ague, croup, dysentery, and other diseases are frequently caused by residence on damp soil. The death-rates from consumption in a number of towns have been reduced one-half by proper drainage of the subsoil. Coughs and colds are prevalent among dwellers on clay. In long-continued drought, too, clay is apt to crack so as to cause deep fissures which may seriously endanger the foundations of badly-constructed houses.

It is obviously impossible in an overcrowded country like ours to provide a porous site for every house that is built, but when the soil happens

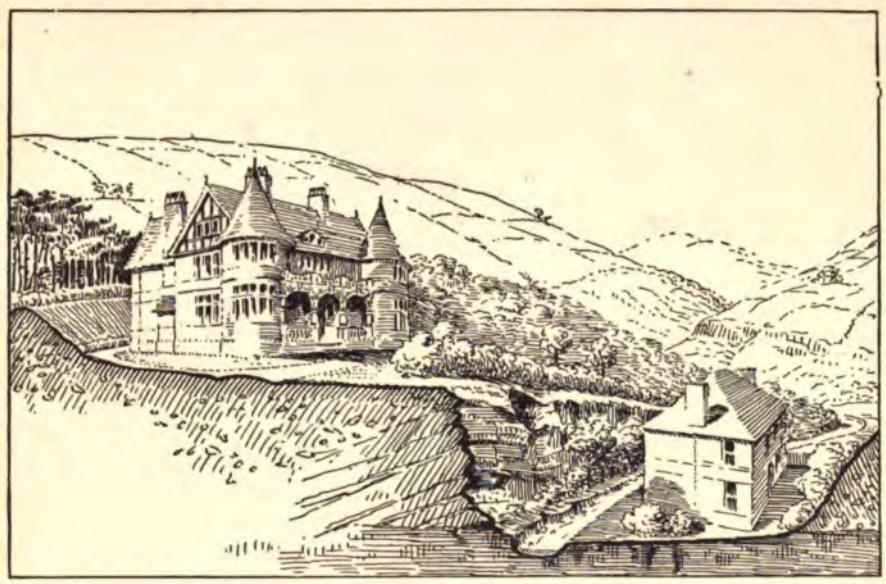


Fig. 2.—Healthy and Unhealthy Sites.

Upper House, warm and dry on pervious stratum; Lower House, cold and wet on low-lying impervious stratum.

to be heavy and wet it can be greatly improved by subsoil drainage. Open-jointed pipes, or small drains built with stones or bricks, help to dry it, if they are laid at a slope beneath the surface. They should never, however, run directly into a cess-pool or sewer. Trees, shrubs, and even grass are valuable as water consumers. They also cleanse the soil by using up much of its organic matter, which, though nutritious for plant life, may be pernicious for human life. The great roots of large trees are very helpful in drinking up the ground-water. Eucalyptus, and many other plants—even common sun-flowers, which will thrive anywhere—have a specially valuable influence in drying and cleansing the soil.

Besides these palliatives, however, a solid ground-layer of good concrete made with Portland cement, not lime, and finished with neat cement or (preferably) asphalt, must be laid under the whole of the basement, as shown in fig. 1, in order to prevent damp and ground-air from rising into the house. A damp-proof course—that is, a course of glazed stoneware, slates, asphalt, or other impervious substance—inserted in the brickwork

about a foot above the ground-level will prevent damp from rising into the walls above. The ground-layer and the damp-proof course should be laid during the construction of the house; they can only be inserted afterwards at very great trouble and expense. Basement rooms which are intended for regular occupation, and the floors of which are below the surface of the external ground, should be surrounded with an open area, as shown in fig. 1, in order that the walls may be kept dry.

If in doubt as to the nature of the soil, it is best to consult the medical officer of health of the district, or the surveyor to the local district or county

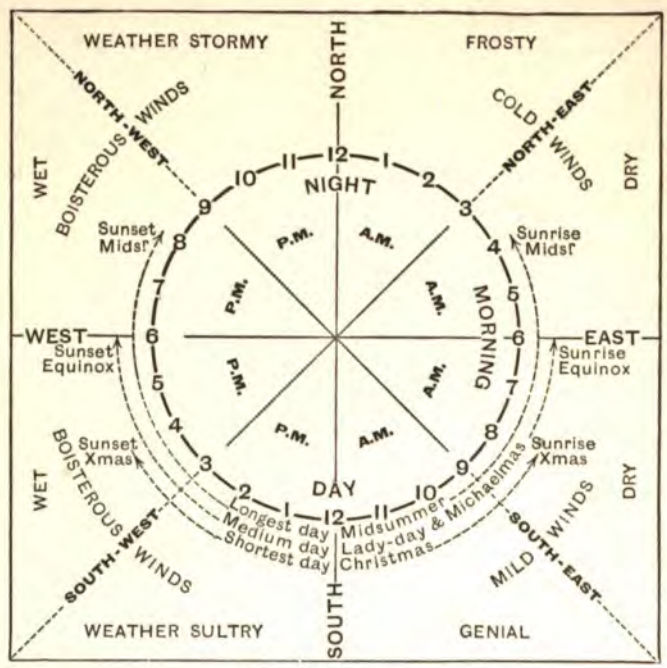


Fig. 3.—"Aspect" Compass.

The diagram shows the normal characteristics of the winds blowing from the different points of the compass, and of the weather which may be expected while they prevail. Thus, S.W. winds are generally boisterous in this country, bringing rain and heat.

On the dial in the centre is shown the length of the day (from sunrise to sunset) at Midsummer, at the Equinoxes, and at Christmas. Thus it will be seen that a house facing south has the greatest amount of sunshine all the year round.

council. With regard to London, an explanatory geological map at the Geological Museum, Jermyn Street, can be consulted without fee.

Elevation.—Low-lying places should, if possible, be avoided, especially when above them lies a graveyard, from which the drainage is very dangerous. High ground, unless exposed too much to winter storms, is generally much to be preferred to a lower situation, but if a house is so close to a hillside as to prevent the access of air at the back it will assuredly be damp.

Aspect.—"A damp house is a deadly house" is a good aphorism for the house-hunter to fix in his memory. If it is dark as well as damp it will be

doubly deadly. "Live on the sunny side of the street, where the doctor never comes", is an old saying. It has often been remarked in hospitals that the patients on the sunny side recover more rapidly than those in the wards facing north. Bacteriologists have proved that sunlight is a powerful destroyer of disease-germs. A house facing south-west or south-east will be found much healthier than one facing due north; as it is also warmer, less fuel is required for heating purposes (fig. 3).

Surroundings.—Gloomy surroundings are very depressing. Everything that is good for the spirits is good for the health; therefore a cheerful outlook is important. Although, as already said, trees are valuable for drying and cleaning the soil, they should not grow so close to the house as to shut out light and air from the windows; if they do this they will make it damp.

Importance of Nice Neighbours.—Before taking a house, especially on lease or long agreement, it is very necessary to know something about the residents in the vicinity; for if the world is small, it is so only for those with money and leisure to move about. People with limited means must make their friends in their immediate neighbourhood. For this reason, too, it is unwise to settle in any place permanently without introductions. English society is notoriously exclusive, though perhaps less so than it used to be, and a long period of isolation is apt to be the lot of any family that comes without credentials of some sort.

It is very desirable to enquire into the antecedents of the house and its last occupants. If they have been objectionable people this may cause prejudice against their successors. The idea that because one tenant has run away in debt the next may do the same, seems irrational enough, yet it has to be reckoned with. Such enquiries are also important from a hygienic point of view. If the former occupants suffered often from illness —sore throats or diphtheria for example—it may be safely inferred that the drains are in a bad state.

SANITARY CONSIDERATIONS.

Sanitary Conditions.—Though, no doubt, it needs a properly qualified person to decide whether the sanitary conditions are perfectly satisfactory, many of the points which make the chief difference between a healthy and an unhealthy house are quite easily comprehended by anyone of ordinary intelligence. First of all, it must be borne in mind that the air from drains is, even in the smallest quantities, always deleterious, and in large quantities very dangerous indeed. To have all impurities carried outside, and at the same time to prevent the air from the sewer or cess-pool from getting inside, is the end and aim of a sanitary drainage system.

The first thing to make sure of when choosing a house is that its drainage accomplishes this object. No matter how desirable it may be in

other respects, if its drainage system is defective, it should not be taken until the defects are remedied. The would-be householder should always insist on being supplied with a plan of the drains, and should inspect all the pipes. The most important points to observe are:—

(1) Whether the drains run under the house. A plan of the drains will show this at once. If they do, as is perhaps sometimes inevitable in a town, they should be of iron, or properly concreted around. A leak under the house has frequently been the cause of fatal illness.

(2) Whether the W.C. is in the middle of the house. It is often found in this dangerous position in old houses. The best situation for the closet is in a projecting wing, connected with the main building by a short passage with windows on each side so that a cross ventilation can be established, as shown in Plate I. If this is not possible, it should have at least one external wall, with a large window, and with grates for ventilation. The more light and air that enter the better. It should be divided from a living room, not by a partition, but by a solid wall.

(3) Whether the W.C. apparatus itself is of the "pan" type. This kind of closet can be recognized by the "pan", which holds a *small* quantity of water under the bottom of the basin, and which, when the handle is pulled, swings down and drops the contents into a large iron "container" below. Such closets are objectionable, and if possible should be replaced by a more modern form. The best apparatus for general use is the wash-down pedestal closet (fig. 4) with hinged seat and lid.

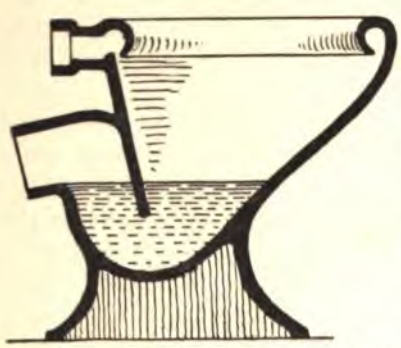
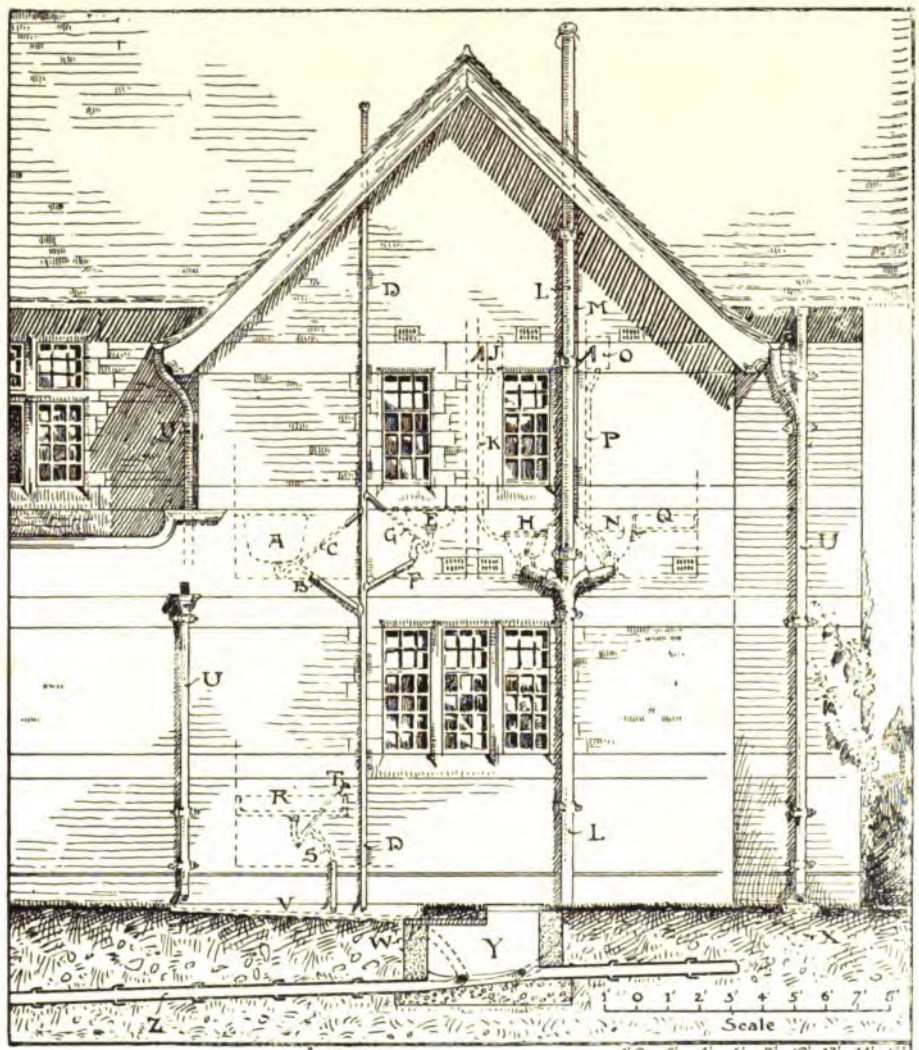


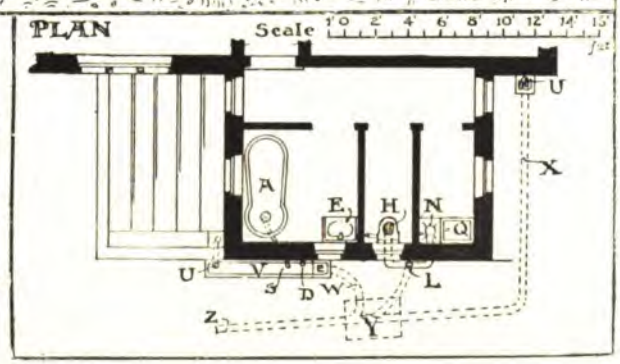
Fig. 4.—Section through Wash-down Pedestal Closet.

(4) Whether the W.C. is flushed from the cistern containing drinking-water. Every W.C. should have a separate cistern, and if this is large enough to discharge two-and-a-half or three gallons at each flush, so much the better.

(5) Whether the soil-pipe, leading from the W.C. to the drain, is inside the house. Such a position is unsuitable, but should the pipes be inside the house and their removal involve prohibitive expenditure, special care must be taken to ensure that the pipes are absolutely air-tight.

Every soil-pipe should be outside the house, and should be carried up full-size, as a ventilating pipe, to as high a point above the roof as possible, as shown in Plate I. at LL. The open end of the pipe should not be near any windows or skylights, and should be provided with a wire cage to prevent stoppage by birds' nests, leaves, &c. Soil-pipes should either be of *drawn* lead with wiped-solder joints, or of strong cast-iron with caulked-lead joints; earthenware pipes are unsatisfactory, and *seamed*-lead pipes (which may be distinguished from *drawn*-lead by the longitudinal seams) are very apt to corrode along the seams.





A, Bath.

B, Trapped waste from bath.

C, Anti-syphonage pipe from bath-trap.

D, Waste-pipe for bath and lavatory carried up as ventilation-pipe.

E, Lavatory.

F, Trapped waste from lavatory.

G, Anti-syphonage pipe from lavatory-trap.

H, Pedestal wash-down W.C.

J, Flushing-cistern for W.C.

K, Flushing-pipe for W.C.

L, Cast-iron soil-pipe and drain-ventilating pipe.

M, Anti-syphonage pipe from traps of W.C. and slop-sink.

N, Slop-sink.

O, Flushing-cistern for slop-sink.

P, Flushing-pipe for slop-sink.

Q, House-maid's wash-up sink with waste into slop-sink.

R, Sink in scullery.

S, Trapped waste from sink.

T, Anti-syphonage pipe from sink-trap.

U, U, U, Rain-water pipes discharging over trapped gullies, &c.

V, Glazed stoneware channel with wire cover.

W, Trapped drain from channel.

X, Trapped drain from rain-water pipe.

Y, Inspection chamber with air-tight cover.

Z, 4-inch drain leading to disconnecting chamber, and thence to sewer or cesspool.

ELEVATION AND PLAN SHOWING GOOD ARRANGEMENT OF SANITARY FITTINGS, ETC.



(6) Whether the waste-pipes from baths, lavatories, sinks, &c., are connected directly with the soil-pipes or drains. Every waste-pipe should be "trapped" immediately under the fitting, by means of a loop of pipe so arranged as to hold sufficient water to prevent air passing through the pipes under ordinary circumstances, and no waste-pipe from the fittings mentioned should be connected directly with either the soil-pipe or the drains, but should discharge in the open air over a channel leading to a trapped gully as shown at V in Plate I.

(7) Whether the waste-pipes from different fittings are connected with each other. If they are, the traps should be ventilated, otherwise the water in (say) the lavatory trap may be drawn out by the discharge from the bath, and foul air may thus be enabled to pass into the house. The proper method of ventilation is shown at C and G and at M, in Plate I.

(8) Whether the drains are ventilated, and disconnected from the sewer or cess-pool. In many cases neither ventilation nor disconnection has been attempted, and the consequence is that the foul air from sewers and cess-pools is often forced through the traps into the house. A trap should always be inserted in the drain before its connection with the sewer or cess-pool, and an air-shaft provided immediately on the house side of the trap. The soil-pipe may serve as the ventilator at the upper end of the drain. Rats in a house are often a sign that the drain is not trapped on its way to the sewer.

Cess-pools.—When the drains run into a cess-pool, the position of the latter is of the utmost importance. Under no circumstances should it be less than 100 feet from the house and from the source of water-supply. If it leaks, the contents will contaminate the soil for a long distance. It should be built of concrete or brickwork, in such a manner as to be absolutely water-tight, and should be properly covered and ventilated. No overflow-pipe is required, as the cess-pool ought to be emptied periodically. The arrangement should be such that the fact of the cess-pool being full will be apparent before the sewage has begun to dam up the drain leading to it.

Tests for Leaking Drains.—Procure from a chemist an ounce of foreign oil of peppermint. It should be mixed with a quart of boiling water, and, after all doors and windows have been closed, should be poured into the pipes at the highest accessible opening outside the house, while someone who has not been near the peppermint examines all suspected points. If a leak exists, a strong odour of peppermint will soon be detected. Smoke-rockets can also be obtained from any plumber, and are easily used according to the accompanying instructions, but the smoke-test is best applied by means of a smoke-machine, which drives the smoke into the drains with considerable force. In no case should the tests of amateurs or of plumbers be trusted when drains are suspected to be faulty.

Sanitary Report.—It is absolutely essential when taking a new house to get a sanitary engineer's written report on the drains. This usually costs one or two guineas, and if the landlord is given to understand that

the prospective tenant will not take the house unless such a report is supplied, he will seldom object to pay the fee.

Water-supply.—The source of the water-supply varies in different localities. Speaking generally, the best water is derived from deep springs, and the worst from shallow wells and ponds, both of which are liable to be contaminated.

In London and most large towns water is supplied by companies, who store the water of some available river or lake in reservoirs and filter it through beds of sand and gravel. The water is supplied on either the

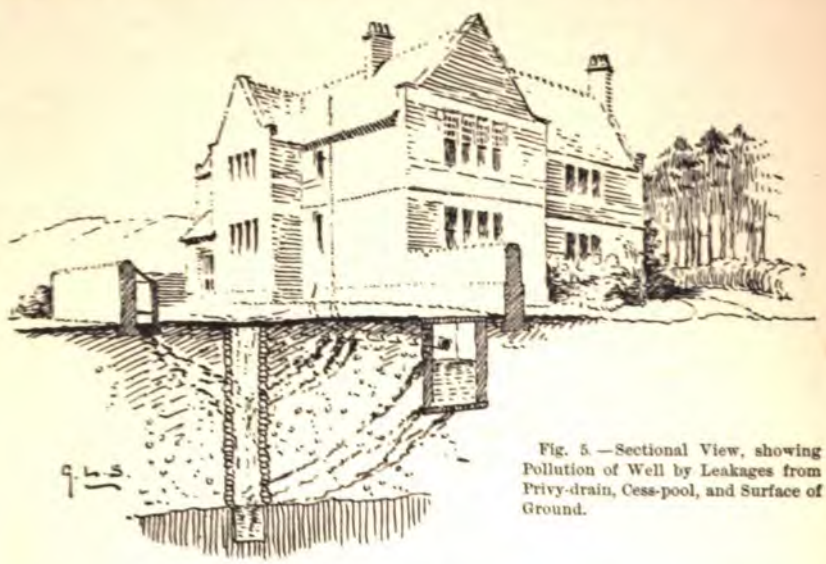


Fig. 5.—Sectional View, showing Pollution of Well by Leakages from Privy-drain, Cess-pool, and Surface of Ground.

constant or the intermittent system. In the former case it comes directly from the main, and no cistern is needed for storage; this is the better plan, as the danger of contamination in the house is avoided. In the latter case storage must be provided, as the water is only "on" for a certain time every day. A serious objection to the intermittent system is that if from carelessness or accident the cistern is allowed to become empty, the house may be left for some time without water.

Cisterns.—With regard to cisterns, three things are essential: (1) They should never be placed in a sleeping-room; (2) they should always be covered with closely-fitting lids; (3) they should be cleaned out from time to time. In some insanitary houses they are so placed that they can never be cleaned out. As water is a powerful absorbent of noxious gases, to place a cistern where these gases can reach the water is to invite disease. Professor De Chaumont says: "Certain waters act very strongly on lead, rain-water particularly, soft waters generally, and waters containing nitric acid, which is always found in wells in the neighbourhood of cess-pools. It is an extremely dangerous poison, one-tenth of a grain in a gallon

(or one part in 700,000) being enough to produce poisonous symptoms. No tanks or cisterns ought to be of lead, or be soldered with it." The best material for cisterns is glazed stoneware or enamelled fire-clay; slate is also a good material, but the joints are apt to leak. Galvanized-iron cisterns are often used, and are much better than lead, but are not very durable. The overflow-pipe should discharge into the open air, never into a drain.

Wells.—Water in wells is frequently rendered very impure by sewage matter from privies, leaky drains, and cess-pools, as shown in fig. 5. Diarrhœa, dysentery, and ague are often caused by impure water, while typhoid fever is especially a water-borne disease. If the water-supply, as is usual in country places, is derived from a well, it should be at least 100 feet from any cess-pool. Unfortunately, the two are sometimes found quite close together, so that during heavy rain the overflow from the cess-pool pours into the well. Throughout the whole depth of a pervious surface stratum, such as sand or gravel, the well should be lined with a water-tight ring, which may be of concrete or brickwork, or of iron or glazed earthenware pipes. The top of the well should be raised above the ground and covered, in order to prevent surface water from flowing into it.

To test for lead, fill two white cups with the suspected water. Dip a glass rod into liquid sulphide of ammonium and stir it round in one of the cups. If the water does not change colour, as can be seen by comparing it with that in the other cup, it is free from lead. If, however, it becomes brownish, add a few drops of hydrochloric acid. When the colour is caused by iron, it will disappear. If it still remains, the water almost certainly contains lead.

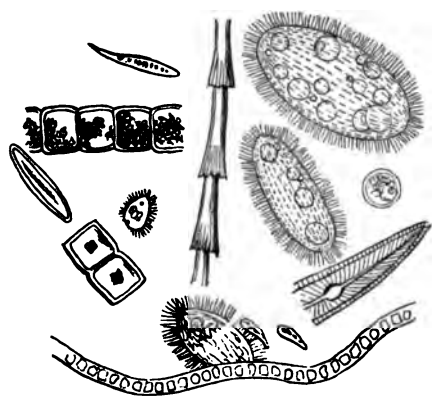


Fig. 6.—Some Animal and Vegetable Structures found in a Drop of Thames Water.

The presence of dangerous organic matter cannot be detected by any rough-and-ready method. Nothing but a thorough bacteriological examination by an expert is satisfactory.

Boiling for at least ten minutes will usually render water safe. Ordinary filters in ignorant hands are worse than useless. A filter must be thoroughly cleaned and purified frequently, or it will itself become a breeding ground of minute living organisms (fig. 6). The best filters now known are of the Pasteur (Chamberland) and Berkefeld types.

All doubtful points about the water-supply should be decided before an offer is made for a house, as a landlord can hold a person to an offer made.

Comfort of Rooms.—The size of the rooms is an important point to consider in the choice of a house. If they are very large they are expen-

sive to furnish and difficult to warm in winter, while, on the other hand, if they are very small they cannot easily be ventilated without draughtiness.

THE CONDITION OF THE PREMISES.

The repairs here contemplated are such as might be required for damages arising from ordinary wear and tear, and might reasonably be demanded for an ordinary tenancy from year to year. Structural defects and drawbacks which, though not of a very serious nature, yet lessen appreciably the value of a house, are also noticed. But a house in which *rot*, wet or dry, has taken hold of the roof and floor timbers and other wood-work, is best avoided altogether, for in that case renewals are required rather than repairs; and as there is always the danger that all the rotten wood may not be entirely removed or all the fungi entirely eradicated, the new wood-work may be attacked. Timber, if suspected, should be probed with a knife, which will easily enter rotten wood. But if it has been painted several times it may have a hard skin, in which case tapping is a better test.

Preliminary Examination.—When a house is likely to be purchased or to be leased for many years, it should be inspected by a responsible building surveyor, as there are many details that require practical experience. If the lease or conveyance is burdened with a repairing covenant, the state of repair and structural defects become extremely important questions involving serious consequences. Very often, however, an intending tenant makes a preliminary examination himself, and, as some knowledge is necessary for that purpose, he may find the following hints useful. His examination should extend to every part and detail of the buildings and appurtenances from roof to cellar, for any defects that have not been noticed may have to be made good on leaving, even though they may have been caused by a previous tenant.

All should be briefly described when the landlord's attention is drawn to the repairs needed. It is best to commence with the main roof, lead-flats, servants' annexe, bay-windows, oriel roofs, and all external, and therefore particularly exposed, parts, for these need the most careful examination.

In towns, where detached houses are exceptional, fire-walls are important; that is, the prolongation of the division or party walls up through and above the roofs, so as to prevent the spread of fire from adjoining buildings. This affects the rate of insurance. A convenient way of access to the roof available at all times is of much advantage for keeping gutters clean and for effecting repairs. The hinges of the trap-door in the ceiling giving access to the roof should be examined, and also the counterweight apparatus sometimes used to raise the trap-door. The condition of the chimneys, especially as regards their stonework or brickwork, the coping of fire-walls, and the pointing of mortar joints should not be neglected.

Flashings, aprons, and eaves-gutters should be carefully examined; if these are defective water is bound to make its way into the house. Flashing is the name given to the strips of lead or zinc used to protect the junction between roof and upstanding wall or chimney. When these strips lead the drip of a wall into a gutter, they are called aprons. Gutter "cess-pools" leading into down-pipes should be properly guarded to prevent leaves or dust from choking them up. The accompanying diagram (fig. 7) will help to explain the few technical terms which it is impossible to avoid.

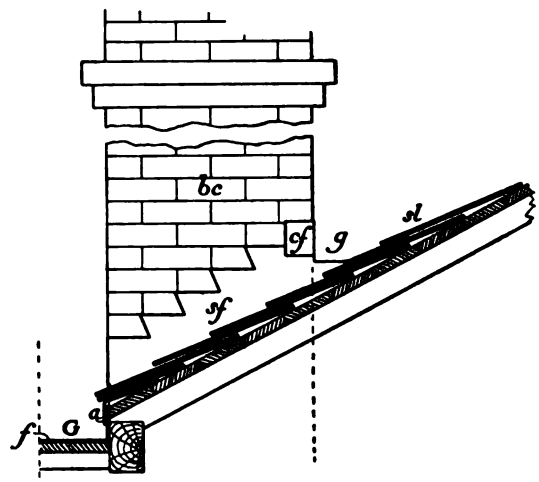


Fig. 7.—Diagram illustrating Technical Terms. *sl* Slates in Courses. *cf* Counter-flashing. *sf* Stepped-flashing. *a* Apron. *f* Flashing. *g* Chimney Gutter. *G* Gutter in Horizontal Valley. *bc* Brick Courses.

The slates and tiles should be whole and sound, and firmly nailed, each with two copper nails. Galvanized-iron nails are not so good. Main external cornices, balconies, window-rails, and balustrades, are often, if in bad condition, a source of danger to passers-by and others. Dormers, lantern-lights, and sky-lights should show no sign of leakage. There is sometimes a good deal of wood construction here, which will need attention. The cords and pulleys of ventilating sashes should also be tested. Stains on the rafters, ceiling, joists, and other places in the garret are often signs that the roof leaks.

Walls and Ceilings.—Ceilings, partitions, and battened walls should be examined for stains, and, by tapping, for broken or loose parts. The plastering in jerry-built houses is bad. Battened walls have lath-and-plaster facing to prevent damp showing in the room, but the wood-work is liable to decay. The space between plaster and wall harbours vermin. Outer walls, if of soft brick, retain damp, and if thin admit it easily. They should never be less than fourteen inches, or a brick and half, in thickness, otherwise they will have little effect in stopping the passage of sound. Hollow walls are better in this respect, and also in preventing dampness inside the house.

Floors.—The floors should be stiff, and should not vibrate at every step; the boards should be without knots or mouse-holes, and with a good surface. If there are any vermin in the house, traces will probably be found near the baseboards, which should make a close joint with the floor and wall all round.

Doors.—The doors should swing freely on their hinges and fit the frames. The locks, handles, and keys should be tried. Finger-plates, if made of china, are frequently broken by painters when repainting.

Windows.—The windows, if hung by sash-weights, should slide to their full height easily. The sash-lines should not be frayed; the glass, when of inferior quality, distorts the vision. The fastenings should be substantial and in proper working order. Where sashes are large, as in most central windows, the lower should have brass or bronze lifts, and the upper pull-downs. The hinges, knobs, and fastenings of shutters and back-flaps should be in good condition, and should fit when open or shut. French windows should be rain and wind tight, with hinges, knobs, fastenings, and holdfasts in good repair.

Grates.—Grates should be carefully inspected for looseness or other defects. When the chimneys smoke, traces will probably be found over the fireplace and on the ceiling, if not newly whitewashed to mask discolouration. In Scotland the grates usually belong to the tenant. In some parts of the kingdom the gas fixtures are also supplied by the tenant. The kitchen-range and stoves should be examined for cracks, imperfect joints, leaky boiler-taps, and badly-fitting or broken oven doors. Flues and dampers should also be in order. The connections of stoves with pipes and chimney should be smoke-tight.

Miscellaneous.—On the staircase the steps and banisters should be firm and unbroken.

In the water-closet, seats, hinged covers, and other parts should be examined. In the bath-room, or housemaid's closet, hot and cold water taps for the use of the housemaid when she wants to fill the jugs in the bedrooms are a very great advantage. The waste-plug and chain or valve should not leak.

Cellar windows, shelves, and steps should be in good order. The cellar should be dry and have no musty smell. It will be found useful for storing vegetables, roots, green fruit, and dairy products, especially in hot and cold weather.

The state of the painting and decorations should be noticed. Bells should be tested in all parts for defects. Verandahs will require examination, and also railings, walls, gates in respect of their hinges, locks, latches, and fastenings.

A southerly aspect is the healthiest for bedrooms and sitting-rooms, which should have as many hours of daylight as possible. But kitchens, larders, and dairies, in all of which coolness is necessary, should face north.

Bedrooms should be so planned that the bed need not face the window.

Ventilation.—The chimney in every room with a fireplace provides a good ventilation shaft if only the register is left open. Besides this, all windows should open top and bottom. Air which has been warmed by passing through the lungs always rises, and if no provision is made for its escape, it falls gradually, and is inhaled a second time. To prevent this, some method of changing the atmosphere of a room is necessary. Many of the ventilators sold in the shops are excellent for the purpose, but one which any handy man can make for himself at the cost of a few pence

is described under "Health" (vol. iv.). The great object in the ventilation of rooms is to have the entrance of fresh air overhead, not underfoot.

State of the Garden.—The soil of the garden is another point to be considered in the choice of a house. Clay needs to be manured heavily, and to be deeply trenched before it becomes productive, while sand contains little or no plant food. The best soil is loam, which is a mixture of the two. In taking a neglected garden, the weeds in it should be noticed. If they are perennial, such as couch-grass, their removal requires much labour, because the roots spread far, and while any remain the plant will spring up again. Annual weeds, like groundsel, on the other hand, are of less consequence, as they can be easily cleared. Paths should be well and firmly made, or they quickly sink and wear into holes.

THE LAW OF LANDLORD AND TENANT.

I. IN ENGLAND.

The house having been chosen, there often remains the question whether to take it on lease or to buy it; but the motives which govern the decision must necessarily differ so widely in different cases, and must depend so largely on individual and private considerations, that it would obviously be quite useless to attempt to discuss them here. Should the decision, however, be to buy, the intervention of a solicitor is absolutely essential, for the formalities which accompany the transfer of real property are still, in spite of recent legislation, of so involved and technical a nature, that no one inexperienced in legal matters should attempt to meddle with them. Should the decision, on the other hand, be to take the premises on lease, the intervention of a solicitor, though still highly advisable, is no longer an absolute necessity.

It is necessary to observe that the rules of law in regard to leases are not the same in Scotland as in England, and that, therefore, the rules laid down in this article for guidance in the one part of the United Kingdom will be of no assistance to the would-be tenant in the other. The English law of landlord and tenant will be explained first, and the Scots law on the same subject afterwards.

DIFFERENT KINDS OF TENANCY.

It is usually said that four kinds of tenancy are recognized by the English law: (i) for a term of years; (ii) from year to year; (iii) at will; and (iv) at sufferance. As a matter of fact, however, there have grown up certain kinds of tenancy—from week to week, for instance, and from month to month—which, though they may be referred generally to the second of these four classes, have yet some incidents of their own, and constitute at any rate a series of subdivisions.

The main fact to be borne in mind is that in all kinds of tenancy it is open for the parties, in almost every case, to settle between them the particular conditions of the letting. Every intending tenant, therefore, whether his holding be from year to year or for a term, should insist on having every condition of his tenancy set out clearly in black-and-white, so as to leave nothing to implications of law, which are too frequently obscure and doubtful.

Tenancy at Will.—A tenancy at will is determinable at any moment, without previous notice, at the will of either party. This kind of tenancy, owing to its ever-present potentiality for hardship, has never been favoured by the law, which invariably seizes on the slightest indication of a contrary intention of the parties—on the payment, for instance, of a yearly rent—to construe it as a tenancy from year to year.

Tenancy at Sufferance.—A tenancy at sufferance is even less important. It arises when a man has entered premises as of right, but continues in possession after the right has determined, without either the assent or dissent of the person entitled to the property. A tenant who continues in possession without authority, after the determination of his lease, is an instance in point. A tenancy at sufferance, like a tenancy at will, is determinable at any moment, without previous notice.

Tenancy for a Term.—The nature of a tenancy for a term may be easily understood. It consists in letting for a definite period—it may be for a single week, it may be for a thousand years—to commence on one particular day and to end on another. No notice is necessary on either side to bring such a tenancy to its conclusion. During the period of the tenancy neither the landlord nor the tenant can bring it to a conclusion except by mutual agreement, or except under certain special circumstances, as, for instance, forfeiture and disclaimer.

Tenancy from Year to Year.—A tenancy from year to year is for one year certain, and afterwards for any such number of additional years as landlord and tenant shall mutually agree upon. At the end of any complete year from the beginning of the tenancy, the holding may be brought to a conclusion at the will of either party, provided that the party determining shall have given the other a clear six months' notice. As a simple illustration, a letting from year to year, commencing on the 1st January, may be taken. The tenant is "in" for one year certain, but if either he or his landlord gives notice to determine the tenancy on, or prior to, the 30th June, the tenancy will then come to a conclusion on the 31st December. If, however, neither party gives the required six months' notice, the tenancy will then last for another year certain, and so on from year to year, till one of the parties gives the required notice. The tenancy, it must be remembered, is determinable only at the end of any particular complete year from the date of its inception—that is, in the illustration given, on some particular 31st December. "If the tenancy be from half-year to half-year, a half-year's notice to quit must be given; if from quarter to quarter, a quarter's notice; if from month to month, a month's notice; and if from week to week, a week's notice, unless otherwise expressly stipulated between the parties."

THE LEASE.

Tenancies are created in three separate ways: (1) By implication of law; (2) by deed, *i.e.* by writing under seal; and (3) by word of mouth,

or writing not under seal. Any tenancy may be created by deed, but only a limited class of tenancies can be otherwise created.

Tenancies from year to year, and tenancies for a term of years less than three years from the date of their creation, may still be created by word of mouth or by writing not under seal, provided always that the rent reserved by them amount to at least two-thirds of the full improved value of the property demised. Tenancies, on the other hand, for a fixed period of more than three years from their creation, and tenancies of every description (other than those at will and sufferance) in which the rent reserved does not amount to two-thirds of the full improved value, must now be made by deed, *i.e.* writing under seal.[1]

Tenancies, then, according to their nature, may be made by implication, by deed, and by word of mouth or writing not under seal. With implication, and with word of mouth, it is better to have nothing to do; and whenever it is not absolutely necessary—as in many cases it has been seen that it is—to make a lease by deed, it is better to have it put into writing. The only essential difference between a deed and a writing not under seal is that the former is always attended by certain formalities of execution; but deeds are also generally phrased with much greater precision and in more technical language than merely written leases.

The Seven Parts of a Lease.—The lease, however, whether made by deed or unsealed writing, will in most cases consist of at least seven essential parts: (1) The parties—a topic on which it is unnecessary to enlarge; (2) the operative part of the instrument by which the tenancy is actually created; (3) the parcels, *i.e.* the description of the property leased, which should always be set out with precision (a plan, if not indispensable, is often well advised); (4) the *habendum*, setting out the nature and duration of the term demised; (5) the *reddendum*, specifying the amount of the rent, and the times at which it is payable; (6) the lessee's covenants, with a proviso for re-entry on the part of the landlord in case of their being broken; (7) the lessor's covenants, if any. The reader who will turn to the specimen lease given at the end of this section will have little difficulty in analysing it into its component parts.

WHO MAY GRANT VALID LEASES.

Should a tenant agree, without further stipulation, to accept a lease, he is precluded by a section of the Vendor and Purchaser Act, 1874, from investigating his landlord's title, and he may thus find himself, should he have paid a premium for his lease, or should the property be one of increasing value, in an extremely awkward position. To guard against this hardship it is prudent to make it a condition precedent to the acceptance of the lease that the landlord's title shall be fully disclosed. In the ordinary case, however, of leasing a house without paying a premium, and where there is no question of improving value, the matter is generally of little

[1] See ante, page 16.

importance; for clearly no one is likely to wish to interfere with a good tenant unless there is some immediate probability of monetary or other advantage.

There is, therefore, not much need to dwell on the disability of lessors to grant good leases. A few words of practical advice in the case of infants, married women, and certain limited owners will suffice.

Infants and Guardians.—In dealing directly with either infant or guardian, the lessee finds himself at this disadvantage—that, while liable to be bound himself for the whole term of his lease, he may have his tenancy avoided by the infant at any moment on the latter's coming of age.

Although, however, it is clearly inadvisable to attempt to deal directly with an infant, and in most cases with an infant's guardian, the transaction can be safely carried through by means of the machinery provided by the Settled Land Act, 1882. Briefly, the effect of the 59th and 60th sections of that statute is to enable the leasing powers bestowed by the Act on a tenant for life to be exercised on behalf of an infant land-owner (1) if there be a settlement, by the trustees of the settlement; or (2) if there be no settlement, "then by such person and in such manner as the Court, on the application of a testamentary or other guardian or next friend of the infant, either generally or in a particular instance, orders".

Married Women.—In the case of taking a lease from a married woman, much depends on the date at which she was married, or on the date at which her title to the property in question accrued. It is, of course, assumed that her property has not been brought into settlement. If she married after the 1st January, 1883, or if her title accrued after that date, she is now entitled to dispose of the property by will or otherwise, exactly as though she were still unmarried. Although leasing is nowhere in the Act specifically alluded to, yet, in the opinion of authoritative lawyers, it is in fact included in the above extensive power. In the case, however, of women married prior to the date mentioned (except with regard to property becoming due to them afterwards) the path of the would-be tenant is thickly beset with legal pitfalls and quagmires. No one should attempt to take a lease from a woman thus circumstanced without the assistance of a qualified lawyer.

Limited Owners.—A tenant for life can make valid leases under certain conditions which are more particularly specified in the Settled Land Acts of 1882 and 1890.

Mortgagors and Mortgagees.—It is important in taking a house under mortgage to consider the capacity of mortgagors and mortgagees to grant valid leases. Formerly neither could make a good lease without the concurrence of the other, unless special leasing powers were inserted in the mortgage deed. In the case of mortgages created before the 1st January, 1882 (or afterwards if the provisions of the Conveyancing and Law of Property Act, 1881, are specially excluded), the old law still holds good. In the case, however, of mortgages made after 1st January, 1882, if the operation of the Act is not expressly excluded, a limited power of

making ordinary residential leases is now conferred on both mortgagor and mortgagee while in possession. The lease, as in the case of the Settled Land Act, 1882, must be for a term not exceeding twenty-one years; and the lessor is not at liberty to take a premium as part of the rent reserved.

FORMS OF LEASE OF DWELLING-HOUSE.

I. *Agreement from year to year.*

An Agreement made the day of between A. B. of the one part and C. D. of the other part

1. The said A. B. agrees to let and the said C. D. agrees to take from the day of from year to year the [description of premises demised] on the following terms until the tenancy shall be determined as hereinafter mentioned

2. The rent to be £ per annum payable [times of payment] and the tenant to pay all rates and taxes except tithe and land-tax

3. The tenancy to be determinable on any quarter day on either party giving a previous quarter's notice to the other

4. [Such agreements as to repair, insurance, &c., on the part either of landlord or tenant as may be mutually arranged.]

II. *Lease for 7 years.*

This Indenture made the day of between A. B. of in the County of (hereinafter called the Lessor which expression shall include his heirs and assigns) of the one part and C. D. of in the County of (hereinafter called the Lessee which expression shall include his executors administrators and assigns where the context so admits) of the other part *Witnesseth* that in consideration of the rent hereinafter reserved and of the covenants hereinafter contained and on the part of the Lessor and Lessee respectively to be observed the Lessor doth hereby demise unto the Lessee *All that* [description of premises] *To hold* the same *Unto* the Lessee from the day of for 7 years paying therefor during the said tenancy the rent of £ without any deduction whatsoever (except for Landlord's property tax) by four equal quarterly payments on the usual quarter days *Provided always* and it is hereby agreed that the said rent shall not be payable in case and so long as the said premises shall be rendered and remain uninhabitable by tempest fire or other unavoidable cause *And the* Lessee doth hereby for himself his heirs executors administrators and assigns covenant with the Lessor that he the Lessee will at all times during the said tenancy duly perform the following covenants:

1. Will during the continuance of the said tenancy (except as hereinbefore provided) pay unto the Lessor the said yearly rent of £ without any deduction whatsoever except as hereinbefore provided at the times hereinbefore stated

2. Will at all times during the said tenancy pay and discharge all rates taxes and assessments whatsoever (Landlord's property tax only excepted) which shall at any time during the said tenancy be assessed charged or imposed upon the said premises

3. [Such agreement as to painting, inside and outside, as may be agreed on between Landlord and Tenant]

4. Will during the said tenancy keep the said premises and all fixtures painting papering and all decorations thereof in good and tenantable repair

And the Lessor doth hereby for himself his heirs executors administrators and assigns covenant with the Lessee that he the Lessor will at all times during the said tenancy duly perform the following covenants:

1. Will adequately insure the said premises against fire and in case of destruction or damage by fire will rebuild and restore the same

2. The Lessee so long as he shall pay the said rent and perform the said covenants on his part to be observed may hold and quietly enjoy the said premises during the said tenancy free from interruption from the Lessor or any person claiming under or in trust for the latter

Provided always that if the said rent or any part thereof shall be in arrear for 21 days after the same shall become due (whether demanded or not) or in the event of any breach of any of the covenants on the part of the Lessee herein contained the Lessor shall be at liberty to re-enter on the said premises

The above forms are intended only to give the reader a rough idea of the kind of instrument by which tenancies are created. So much, however, must always depend on the particular circumstances of each individual case, that no skeleton form can be safely recommended for practical adoption. Leases and agreements should always be prepared with proper professional assistance, and to attempt to dispense with the latter is, in almost every instance, merely to court disaster.

REPAIR AND MAINTENANCE.

Waste.—The tenant, it need scarcely be said, is not entitled to commit what is known as "voluntary waste"; he must not pull down or otherwise wilfully damage the premises of which he is tenant. Of course, his landlord is under a similar prohibition. It has been considered waste—to take an extreme instance—to root up a box border planted by the tenant himself. On these points the law is clear.

With regard, on the contrary, to what is known as "permissive waste" —allowing the property, that is, to go to rack and ruin for want of proper repair—the case is widely different, and special covenants dealing with the subject are inserted in every properly-drawn lease. In the absence of such covenants, it is far from easy to ascertain the state of the Common Law.

Generally speaking, in the absence of express agreement, the landlord

is under no liability to repair. Even though the property be absolutely ruinous at the time of the tenant's entry, and even in the extreme case of its being subsequently destroyed by fire or tempest, the lessor need not expend a single penny on its restoration; though the lessee continues liable during the whole of his term to pay his rent without deduction.

Recent enactments have, however, somewhat curtailed the landlord's immunity. (1) The Public Health Act of 1875 provides that in case of a nuisance "from the want or defective construction of any structural convenience", a notice may be served on the owner "requiring him to abate the same within a time to be specified in the notice"; and the Act provides a suitable remedy in case of his disobedience. (2) By the Public Health (London) Act of 1891 (which applies, however, only to the Administrative County of London), it is enacted that a similar notice may be served on the owner with a similar result, in cases where premises are in such a state as to be a nuisance or injurious or dangerous to health, provided that such nuisance arises from any want or defect of a structural character, and in cases where the nuisance consists in such absence of water-fittings as is declared a nuisance by sec. 33 of the Metropolitan Water Act, 1871. (3) By sec. 75 of the Housing of the Working Classes Act, 1890, it is further enacted that "In any contract made after the 14th August, 1885, for letting for habitation by persons of the working classes a house or part of a house, there shall be implied a condition that the house is at the commencement of the holding in all respects reasonably fit for human habitation. In this section the expression 'letting for habitation by persons of the working class' means the letting for habitation of a house or part of a house at a rent not exceeding in England the sum named as the limit for the composition of rates by section 3 of the Poor Rate Assessment and Collection Act, 1869, and in Scotland and Ireland, £4"; *i.e.* in London, £20; in Liverpool, £13; in Manchester and Birmingham, £10; and elsewhere in England, £8. In these three cases a tenant can compel his landlord to institute repairs of a limited character, unless by chance he has been so indiscreet as to shift the burden on to his own shoulders by entering into too wide a covenant to pay incidental taxation.

Tenant's Liability to Repair.—The tenant's liability to repair, in the absence of express agreement, is not clearly ascertainable. There appears, however, to be a distinction in this matter between tenants from year to year and tenants for a term. The former are apparently bound to do no more than keep the premises wind and water tight; the latter are perhaps liable to a larger extent, but the point is very doubtful. Tenants, it may be noted in passing, are not now liable for the accidental destruction of premises by fire, unless they have waived by express agreement the benefit of the statute 14 George III. cap. 78, sec. 86. As, however, such waivers may be inadvertently effected by a general covenant to repair and leave in repair at the end of the tenancy, the tenant must be careful under no circumstances to commit himself to such general covenant without specially

excepting the case of accidental destruction by fire, or without protecting himself by a proper insurance as dealt with in the succeeding paragraph.

Covenant to Insure.—If an unqualified covenant to repair be inserted in the lease, it is incumbent on the tenant either to insure the premises, or to obtain from his landlord a covenant for insurance containing a distinct undertaking, not only that the money recovered from the insurance office shall be spent on the restitution of the burnt-out buildings, but also that, if such money prove insufficient, the deficiency shall be made good out of the lessor's pocket. Without this clause the tenant may find himself saddled for the remainder of his term with the rent of an uninhabitable building.

In tenancies from year to year, the insurance is generally borne by the landlord. Although it is perhaps unusual for the latter to give any such large covenant for insurance as is indicated above, or indeed any express covenant at all, the lessee should always insist on it. The lessor, in the ordinary course of things, will insure for his own protection; and this being so, he ought to have no hesitation in binding himself formally to do so for the satisfaction of his tenant.

Covenants to Repair.—In leases for terms of years it is usual for the tenant to covenant to execute all repairs; in tenancies from year to year the necessary repairs are generally undertaken by the landlord. In the latter case it would seem to be the custom for the landlord to give no definite covenant, and his action is governed, not by contractual obligation, but by a very natural consideration for the maintenance of his own property. Painting and papering in yearly tenancies are frequently done in an irregular fashion—often at the common expense of landlord and tenant, as the two from time to time mutually agree; a landlord and a good tenant being in a position to bring pressure to bear upon each other, though there frequently results a degree of friction not calculated to enhance the pleasantness of the relationship. It would, indeed, be better in the case of all yearly tenancies for a definite covenant to be included in the lease; and a lessor who honestly intends to keep the premises in suitable condition cannot resent the suggestion.

In considering what constitutes sufficient repair, it is now settled that the age and general condition of the premises at the commencement of the tenancy must be taken into consideration.

It must be remembered, again, that a covenant "to keep and deliver up in good repair, order, and condition" may involve the necessity of putting into repair property actually ruinous at the inception of the tenancy. In this case, therefore, an intending tenant must make very sure that the premises are in proper condition. If, for instance, he hires a property on which there exists a disused and dilapidated out-building, he must be careful to make sure, either that this building is put into proper repair by the landlord before the tenancy commences, or that the necessity of repairing it is expressly excluded from his general covenant. Otherwise, he may find himself saddled with the responsibility by the implication arising from his apparently innocent covenant.

LANDLORD'S RIGHT TO DISTRESS.

The most prominent of the landlord's ancient rights at the Common Law is his right of distress—his right, that is, to enter on to the demised premises, when rent is due and in arrear, without previous legal process, and even, without previous demand of payment, and to seize goods and chattels, with certain exceptions, found upon the premises, whether the property of the tenant or of some third person, and to sell the same under certain conditions, and satisfy his claim out of the proceeds. Originally, the landlord's right began and ended with his power to seize the property and hold it as a pledge, but the present power of sale was added by statute.

Time for Levying Distress.—At Common Law no distress could be levied after the determination of the lease, but this state of things was remedied by statute, the landlord being empowered to distrain (1) within the space of six calendar months after the determination of the tenancy; (2) during the continuance of the landlord's title or interest; and (3) during the possession of the tenant from whom the arrears have become due. Distress may be levied only between sunrise and sunset, of which phenomena it has been decided that no absolute rule can be given. It is safer, therefore, for the landlord to allow himself a sufficiently ample margin of daylight. It is doubtful whether a distress may be made on Sunday, and it must not be levied until after the day on the morning of which the rent becomes due. Where, however, rent is payable in advance, whether by special agreement or by the custom of the country, a distress may immediately be levied.

Arrears Recoverable by Distress.—By the Real Property Limitation Act, 1833, only six years' arrears of rent are recoverable by distress. But if the tenant or his agent has given the landlord or his agent some written and signed acknowledgment that certain rent is due, the period of six years begins to run for that particular amount of rent from the date of such acknowledgment.

Things Privileged from Distress.—Everything found on the demised premises may be seized, with certain well-defined exceptions. Apart from these exceptions, it does not matter in the least whether the property taken belongs to the tenant or to some unfortunate third person. The latter, it is true, has a nominal remedy against the tenant, but the tenant may be merely a man of straw. Or the thing taken may be one for which no damages can prove an effectual recompense—a valuable painting, a piece of old china, or a treasured family heirloom. In such a case it may be possible by prompt action to recover the article from the bailiff by paying its value, or by buying it in at the sale; but when once it is sold its unfortunate possessor has lost all means for its recovery.

Privileged property is of two kinds: (1) Things privileged *absolutely*, *which may never be taken under any imaginable circumstances;* and (2) *things privileged conditionally*, which may be taken only in the case of *there not being other things* discoverable on the premises sufficient to

satisfy the distress. It is not proposed to give here anything like a full list of exempted chattels, but only those exceptions which are likely to interest the class of readers for whose benefit this work is primarily intended.

1. FIXTURES.—Fixtures and things that cannot be restored in the form in which they were taken are exempt from distress. For a discussion of what constitutes a "fixture" the reader is referred to a subsequent section (p. 31). Fixtures which permanently form part of the freehold—keys, for instance, doors, windows, shutters, and furnaces—are absolutely privileged on the ground that the landlord's right extends only to recouping himself out of things found on the premises, not to the recovery of the premises themselves.

Fixtures removable by the tenant during, or at the conclusion of, his tenancy, are similarly protected, but for a different reason. In this case the principle seems to be that nothing is distrainable that cannot be restored in its original condition. Examples of this class of thing are stoves, coppers, grates, and kitchen-ranges. Possibly also these things are protected on the principle first assigned—that, though removable by the tenant, they remain, till removed, a part and parcel of the freehold. The last point raises an important question, for it is obvious that many tenant's fixtures—blinds, for instance, and bookcases slightly affixed to the walls—though clearly not protected on the ground that they cannot be restored, in their original state, would still be protected on the ground of their constituting, temporarily at any rate, part of the freehold.

2. GOODS FOR TRADE.—Goods delivered to be dealt with in the way of trade are exempt from distress. Fortunately the discussion of this topic falls rather outside the scope of the present paper, for "it is difficult to find any sound principle on which all the cases can be reconciled". For the sake of those, however, who find themselves compelled to entrust their goods away from home, it may be well to give a few salient examples. Goods at a warehouse, or deposited with a pawnbroker, and the goods and cattle of a guest at an inn, are absolutely privileged; so also is a horse standing in a smithy to be shod, though horses and carriages standing at livery have been held to be distrainable. It is doubtful, however, whether this latter case is likely to be followed.

3. THINGS IN ACTUAL USE.—Things in actual use at the time of the distress, as distinguished from constant and regular employment (the horse, for instance, on which a man is riding, or the axe in his hand with which he is felling timber), are absolutely privileged.

4. GOODS IN THE CUSTODY OF THE LAW.—Goods in the custody of the law, seized, for instance, by a sheriff's man under a writ of *fieri facias*, are also privileged.

5. WEARING APPAREL, &C., TO THE VALUE OF £5.—Wearing apparel and bedding of the tenant or his family, and the tools and implements of his trade, to the total value of £5, are exempt from distress. But this exception (which is the joint product of the Law of Distress Amendment Act, 1888,

and the County Courts Consolidation Act, 1888) does not apply in cases "when the lease, term, or interest of the tenant has expired and when possession of the premises has been demanded, and when the distress is made not earlier than seven days after such demand". When goods of this character have been improperly taken, their restitution may be ordered by a Court of Summary Jurisdiction under the powers of the Law of Distress Amendment Act, 1895, and if they have been already sold, the same jurisdiction may assess their value and direct its payment to the tenant. The law is studiously silent as to the person entitled to select, within the limited value, the goods to be exempted. The tenant may wish to retain £5 worth of clothing; the landlord, on the contrary, may be anxious to leave him the like amount of bedding and tools. A bedstead ought not, perhaps, to be included under the term "bedding", but the point is very doubtful.

6. LODGERS' GOODS.—Prior to 1871 lodgers' goods were not protected; but tardy justice was done to lodgers by the Lodgers' Goods Protection Act passed in that year. By section 1 of that statute it is provided that in case of a distress by the superior landlord (*i.e.* the landlord of the lodger's landlord) for rent due from his immediate tenant (*i.e.* the lodger's landlord), the lodger is entitled to serve the superior landlord or the bailiff or other person making the distress with a declaration made by himself in writing, setting forth that certain goods are not the property of the immediate tenant, but in the lawful possession of the lodger, and showing further whether any, and what, rent is due, and for what period, from such lodger to his immediate landlord. A correct inventory of the goods claimed, signed by the lodger, must be annexed to the declaration, and a wilful mis-statement amounts to a misdemeanour. By section 2, if the superior landlord, bailiff, or other person still proceeds, after service of the said declaration, to levy distress on the lodger's goods, it will be an illegal distress, and the lodger may apply to a justice of the peace for an order for the restoration of his property, and is further entitled to an action at law against the superior landlord.

7. GAS-METERS.—Gas-meters and fittings (including gas-stoves) when the property of a gas company incorporated by Act of Parliament are privileged.

8. TRADE TOOLS.—Trade tools are subject to distress only when other property is not discoverable on the premises. And it has already been seen that, when in actual use, and also up to the value of £5, they are absolutely privileged.

Where the Distress must be Made.—A distress, as a rule, must be levied on the property out of which the rent issues. A landlord, for instance, who lets two distinct houses, A and B, to a single tenant, must not distrain on A for the rent of B, or *vice versâ*; still less must he seize chattels of the tenant found on property in which he has no interest. These rules, which may always be set aside by special agreement, are subject to an important exception in the case of fraudulent removal. By the Distress for Rent Act, 1737, it is provided that in case any tenant

"shall fraudulently or clandestinely" remove goods from his premises in order to evade his landlord's distress, it shall be lawful for the latter, within the space of the next thirty days, to seize and sell the said goods, wherever found, as satisfaction for arrears of rent, unless the same have been already sold for valuable consideration to a *bonâ fide* purchaser. A restricted power of breaking open places of concealment is given to the lessor; while it is further provided that tenants guilty of this sort of misconduct, and those who aid and abet them, shall forfeit to the landlord double the value of the goods thus removed or concealed. It has been held under statute that removal is fraudulent only when the rent is actually due. The Act applies, further, only to the tenant's own property and not to that of other people.

The Metropolitan Police Act, 1839, empowers any constable in the Metropolitan District to stop and detain, pending due inquiry, all vans, &c., discovered removing furniture between eight in the evening and six in the morning, and at other hours when the constable has good reason for believing that an attempt is being made to avoid the payment of rent. A suitable penalty is imposed on tenants thus transgressing and on those who assist them.

The Mode of the Distress.—Distress may be levied by the landlord in person or by a certificated bailiff, the latter being armed with a written authority called the "warrant of distress". An attempt to distrain by an uncertificated bailiff renders him liable on summary conviction to a penalty of £5; while both he and his employer lay themselves open to a civil action for trespass. An uncertificated bailiff, however, is at liberty to "work out" the distress—that is, to sell the property seized in cases where the original seizure has been carried out by the landlord in person.

The proper method of effecting an entry calls for careful consideration. An outer door must never be broken open, but may be opened by any of the ordinary means, *i.e.* the handle may be turned, or the latch may be lifted. But the bailiff must not put his hand through a broken pane of glass in order to raise the latch. He may climb over a fence, or clamber in at an open window. Where a window is shut but unfastened he must not attempt to open it; when, however, it is partly, but insufficiently open, he may open it wider. Once inside the house, the landlord or his bailiff may breathe more freely; for inner doors and cupboards may be broken open in levying the distress. A distrainer who has once lawfully entered and has been forcibly ejected is entitled to make a forcible re-entry. Should resistance be threatened or violence apprehended, the landlord may call in a constable.

The next step is for the landlord or his bailiff to take possession of the goods required, being careful to take sufficient to satisfy the rent; for a distrainer, having completed one distress, is not permitted to levy a second in respect of the same arrears, unless (1) there were not found enough goods on the premises at the time of the first entry, or (2) some mistake has been made in estimating the value of the property taken. A very

slight act of authority on the part of the landlord amounts to constructive seizure. The next step is to impound the chattels taken, which is now generally done on the premises.

By the Distress for Rent Act, 1737, the distrainer is empowered "to impound or otherwise secure the distress . . . of what nature or kind soever it may be, in such place, or on such part of the premises chargeable with the rent as shall be most fit and convenient for the impounding and securing such distress". The chattels should be secured in a single room, if possible, though more may perhaps be utilized if necessary; but rather than lock up the whole house, the goods should be moved to another place. Moreover, with the consent of the tenant—and it is to his own disadvantage to refuse it—chattels may be technically impounded as they stand, without any actual disturbance. Special regulations as to food and removal apply in the case of horses and other animals.

Sale of Property Taken.—The landlord must serve on the tenant or other person whose goods have been taken a written notice of distress, containing an inventory of the property seized, and assigning a reason for its seizure; and stating also the amount of rent alleged to be in arrear, and the place in which the goods have been impounded. Unless the person thus served proceed to replevy (see next sub-section) the goods within five days from the date of such seizure and notice (a period which may now be extended to fifteen days at the written request of the tenant on his giving security for the additional expense that may be incurred by the landlord), the latter may proceed at the end of the statutory period to sell the goods for the best price obtainable. The five or fifteen days, as the case may be, must be reckoned exclusively of the day of seizure and notice and of the day of sale; but the landlord is free to sell the chattels or any part of them at any earlier period with the written consent of the tenant or other owner. If the sale does not take place at the end of the five or fifteen days, the goods should be removed from the tenant's premises, in cases where they have been impounded on the property demised; unless, indeed, the tenant, for his own advantage, signifies his willingness that they should remain longer, such consent being expressed in what is known as a "holding over" order, which had better be in writing. The tenant or other person whose goods have been seized is at liberty to insist on an appraisement by two appraisers of the value of the property taken.

Where goods have been impounded on the premises they may be sold on the spot unless the tenant or owner request in writing that they shall be removed to a public auction room. Or the distrainer is at liberty so to remove them on his own initiative. The sale, however, need not necessarily be by auction, though the statute requires that the best possible price should always be obtained. Surplus goods should be returned to the premises from which they were taken.

Remedies for Unlawful Distress.—In cases where the distress is wholly illegal—in cases, that is, where no rent is due, where it has been tendered in time, or where privileged goods have been seized—the tenant

has a choice of remedies. Either he may proceed to replevy, or he may bring an action for damages for illegal distress. If the distress is not wholly illegal, but only excessive or irregular, he is confined to the latter remedy.

Probably the remedy of replevin is now somewhat dropping out of fashion. In its present form it amounts briefly to this. The plaintiff, on application to the registrar of the County Court in whose district his goods have been taken, is entitled to obtain them back in a summary manner on giving security by what is known as a replevin bond, to the value of the rent alleged to be due and the probable cost of the replevin action, that he will within a certain specified period bring an action for replevin against the distrainer, and prosecute the same without delay and to a successful issue. Should he, of course, fail in any of these undertakings, his bond is forfeit to the distrainer. If no question of title is involved, and if the rent does not exceed the sum of £20, the action can only be commenced in the County Court; if, on the contrary, title is involved, or the rent exceeds £20, the plaintiff is then justified in seeking the aid of the High Court. Should he, moreover, in this latter case, still prefer to go to the County Court, he is liable to have his action transferred to the High Court by the defendant on a writ of *certiorari*.

In all cases of illegal or irregular distress damages may be recovered by action commenced in the ordinary way; and in cases where no rent was owing, and the goods have been sold, the plaintiff is entitled to recover double the value. Tenants residing in the Metropolitan Police District are provided with a further and summary remedy, in cases where they have occupied any house or lodging (irrespective of the rent paid for it) by the week or month; and in cases where their yearly rent (irrespective of the nature of the tenancy) does not exceed £15. In all such cases, when an unlawful, irregular, or excessive distress has been levied, a magistrate is entitled, under the Metropolitan Police Courts Act, 1839, to summon the delinquent before him, on the complaint of the tenant, and in cases where he is satisfied that a wrong has been committed, to order the chattels taken, if still unsold, "to be returned to the tenant on payment of the rent which shall appear to be due at such time as the magistrate shall appoint"; or, if the goods have been sold, "then to order payment to the said tenant of the value thereof, deducting thereout the rent, which shall so appear to be due, such value to be determined by the magistrate". The landlord or party complained against, in default of compliance with such order, shall forfeit to the party aggrieved the value of such distress, not being greater than £15, the amount to be determined by the magistrate.

Security for Rent.—The acceptance by the landlord of a security for rent in arrear, as, for instance, a bond, bill, or promissory note, does not amount to a payment of rent. The landlord is not thereby debarred from the right to distrain. Nor does an agreement to take interest on rent in arrear deprive him of this right.

Agents and Receivers of Rent.—An authority to tenants to pay rent

to an agent or receiver does not entitle the latter to distrain, even if he receives the rents for his own benefit.

Bankruptcy of Tenant.—Either before or after the commencement of bankruptcy the landlord can distrain for rent due. If, however, he distrain after the commencement of bankruptcy, he can only do so in respect of six months' rent accrued prior to the adjudication. He may then prove in bankruptcy for any surplus.

If the goods are removed from the premises before the landlord distrains, he has no right to follow them.

If in order to avoid distress, a tenant pays rent after an act of bankruptcy, the payment is valid.

Distress for Rent a Waiver of Landlord's Right of Re-entry.—Distress for rent is a waiver of the landlord's right of re-entry for forfeiture for breach of covenant. The more or less recent case of *Shepherd* v. *Berger* is no exception to the general rule. In that case the lease contained a proviso for re-entry "if and whenever" any one quarter's rent should be in arrear for 21 days and no sufficient distress could be levied, and it was held that the effect of the words "if and whenever" was to give the lessor a right of re-entry as often as at any moment of time the two conditions named in the proviso existed. In other words, in this case there was a *continuing* breach after the distress had taken place.

Expenses allowed for Distress.

Scale I.—*Distress for rent where the sum demanded and due shall exceed £20.*

For levying distress, 3 per cent, on any sum exceeding £20 and not exceeding £50; 2½ per cent on any sum exceeding £50 and not exceeding £200; and 1 per cent on any additional sum.

For man in possession, 5*s.* per day; to provide his own board in every case.

For advertisements, the sum actually and necessarily paid.

For commission to the auctioneer. On sale by auction, 7½ per cent on the sum realized not exceeding £100, 5 per cent on the next £200, 4 per cent on the next £200; and on any sum exceeding £500, 3 per cent up to £1000.

A fraction of £1 to be in all cases reckoned £1.

Reasonable fees, charges, and expenses (subject to rule 17, see p. 31) when distress is withdrawn or where no sale takes place, and for negotiations between landlord and tenant respecting the distress.

For appraisement, on tenant's written request, whether by one broker or more, 6*d.* in the pound on the value as appraised, in addition to the amount for the stamp.

Scale II.—*Distress for rent where the sum demanded and due shall not exceed £20.*

For levying distress, 3*s.*

For man in possession, 4*s.* 6*d.* per day; to provide his own board in every case.

For appraisement, on the tenant's written request, whether by one broker or more, 6*d.* in the pound on the value as appraised, in addition to the amount for the stamp.

For all expenses of advertisements, if any, 10*s.*

Catalogues, sale and commission, and delivery, 1*s.* in the pound on the net produce of the sale.

For removal at tenant's request, the reasonable expenses (subject to rule 17) attending such removal.

Rule 17 of the Distress for Rent Rules, 1888, provides that in case of any difference as to fees, charges, and expenses between the parties, or any of them, the fees, charges, and expenses shall be taxed by the registrar of the district in which the distress is levied. The registrar may make such order as he thinks fit as to the costs of such taxation.

Landlord's Claim when Tenant's Goods taken for Debt.—By the Landlord and Tenant Act, 1709, it is enacted that "no goods or chattels whatsoever lying or being in or upon any messuage, lands, or tenements which are or shall be leased for . . . term of years, at will or otherwise, shall be *liable to be taken* by virtue of any execution, on any pretence whatsoever, *unless the party at whose suit* the said execution is sued out shall, *before the removal* of such goods from off the said premises, by virtue of such execution, . . . pay to the landlord of the said premises, or his bailiff, all such sum or sums of money as are or shall be due for rent for the said premises at the time of the taking such goods or chattels by virtue of such execution, provided the said arrears of rent do not amount to more than one year's rent; and in case the said arrears shall exceed one year's rent, then the said party at whose suit such execution is sued out, paying the said landlord or his bailiff one year's rent, may proceed to execute his judgment as he might have done before the making of this Act; and the sheriff or other officer is hereby enjoined and required to levy and pay to the plaintiff as well the money so paid for rent as the execution money". The Act does not apply to County Court execution. By the Execution Act of 1844, it is further provided that "no landlord of any tenement let at a weekly rent shall have any claim or lien upon any goods taken in execution under the process of any court of law for more than four weeks arrears of rent; and if such tenement shall be let for any other term less than a year the landlord shall not have any claim or lien on such goods for more than the arrears of rent accruing due during four such terms or times of payments."

FIXTURES.

Although by a very ancient maxim of the Common Law all fixtures become a part of the freehold, exceptions are made in the case of trivial additions dictated by convenience or a desire for ornament. Custom, for instance, demands that floors should be covered with matting or carpet, and it would be a real hardship if the fact that these are frequently fastened to the premises by nails, should render them the landlord's property. Fixtures

of this kind, or as they are often called, "tenant's fixtures", may be removed under certain specified conditions. These conditions are, that (1) the article in dispute must be one of domestic convenience (or ornament); (2) it must be only slightly affixed to the freehold, so that its removal may be effected without doing appreciable damage; (3) it must have been erected by the tenant; (4) it must be capable of being removed entire; (5) the question must be one directly arising between the landlord and his tenant. Any fixture, it is conceived, which satisfies these five conditions, may be properly removed by the tenant. The following list of articles, all of which have been held removable, is taken from Woodfall's *Law of Landlord and Tenant*: "Hangings, tapestry, and pier-glasses, whether nailed to the walls or panels, or put up in lieu of panels; cornices; marble or other ornamental chimney-pieces; marble slabs, window-blinds; wainscot fixed to the walls by screws; grates, ranges, and stoves, although fixed in the brickwork; iron backs to chimneys; beds fastened to the walls or ceiling; fixed tables; furnaces and coppers; pumps; wash-tubs and fixed water-tubs; coffee- and malt-mills; cupboards fixed with holdfasts; book-cases standing on brackets and screwed to the walls; clock-cases; iron ovens and the like."

Besides articles erected for ornament and convenience, trade fixtures have been equally favoured by the law on grounds of public policy. They are scarcely likely, however, to be of much concern to the general reader; nor is it necessary to consider here the effect of the Agricultural Holdings Acts of 1875 and 1883.

It should be noted, however, that in the matter of the fixtures of an ordinary garden the Common Law principle is undisturbed, except in cases coming under the Landlord and Tenant Act of 1851. By this enactment it is laid down that buildings (among other things) erected by the tenant at his own cost for agricultural purposes, or for the purposes of trade and agriculture, with the previous consent of the landlord, may be removed during the continuance of the tenancy on giving a clear month's previous notice in writing; and this would appear to cover the case of an ordinary hot-house or forcing-pit, which would not apparently be otherwise removable in the absence of special agreement. Fruit-trees and flowers planted by the tenant certainly become the landlord's property.

Time for Removal of Fixtures.—The tenant is clearly entitled to remove his fixtures during the continuance of the original term—the term, that is, in which they were erected; but the minute this determines, his right is gone, and the fixtures become indisputably the property of the landlord.

One curious result of the law calls for careful attention. A tenant who, towards the end of his term, takes a new lease from his landlord, forfeits his right, in the absence of special agreement, to fixtures erected during the original term. Immediately upon the expiration of the original lease the fixtures erected during its continuance become a part of the freehold, and the tenant is not at liberty to remove them during the new term.

In some parts of the country the ordinary Common Law rights as to

fixtures are controlled by a special custom. In all cases, therefore, it is advisable for an intending tenant to make careful inquiry before commencing his tenancy as to the existence and nature of any such custom. But custom may itself, it must always be remembered, be varied or excluded by special stipulation.

Fixtures in Case of Express Stipulation.—A careful consideration of the preceding sub-section will enable the reader readily to appreciate what kind of covenant with regard to fixtures it is prudent to insert, and what should be avoided. In the first place, he must be careful to resist any covenant by which he loses his Common Law right to removal—to avoid such a covenant as, for instance, was given in one well-known case, by which the tenant agreed to give up at the end of his tenancy, "other additions, improvements, fixtures, and things which were and should be anyways fixed or fastened upon the premises". Sometimes, however, the injustice is done in a more insidious way, as when the tenant covenants "to repair and keep in repair the premises and all erections, buildings, and improvements which might be erected thereon during the term, and yield up the same in good and sufficient repair, &c.", under which covenant a verandah, otherwise in all probability removable, was held to have become the property of the lessor. Secondly, the tenant should insist on a license to remove his fixtures "at the expiration of the term", in which case a reasonable time will be allowed him, or better still, to remove them within a specified period, as, say, a month or six weeks. And thirdly, in the event of his renewing his lease, he should have a care that it is set out plainly that the fixtures erected by him during his original term are to be considered his own property, and are not to be included in his tenancy as part of the property demised. In practice, it is not unusual for an incoming tenant to take over the fixtures from the outgoing tenant at a valuation. It is obvious, however, that this can in many cases only be done with the friendly concurrence of the landlord.

COVENANT TO PAY RENT.

Comment has already been made on the hardship which arises in cases where, though the premises demised have been actually destroyed by tempest, fire, or other unavoidable cause, the tenant continues liable for the payment of his rent without a single farthing's deduction. A partial remedy for avoiding this injustice has been already indicated under the head "Covenant to Insure", but it is clear that this remedy fails to cover the period during which the premises are rebuilding.

It is suggested, therefore, that in every lease a proviso should be inserted in the covenant to pay the rent and in the *reddendum* (or, in cases where there is no special covenant, in the *reddendum* only) exempting the tenant from payment when and so long as the premises are rendered uninhabitable by tempest, fire, or other unavoidable cause. Such a proviso will be construed strictly; an exception, for instance, in case of "fire, storm, or

tempest", will not cover the falling of a building by reason of the overloading of one of its floors. Care, therefore, should be taken in framing the exemption to cover all those conceivable contingencies against which the tenant may be considered fairly entitled to claim protection.

RATES AND TAXES.

The legal incidence of rates or taxes in the absence of express stipulation will perhaps appear most clearly from the subjoined table.

I. The tenant must pay:—

(1) Poor Rates.
(2) Assessed Taxes.
(3) General District Rates.
(4) Water and Gas Rates.

II. The landlord must pay:—

(1) Property Tax.
(2) Tithe Rent Charge.
(3) Land Tax.
(4) Sewers Rates.
(5) Special Assessments under Local Acts.

It should, however, at once be pointed out that several of the rates and taxes in the second of the above division—"landlord's taxes", as they are called—are primarily payable by the tenant, who is afterwards entitled to deduct from his rent the expenses thus incurred.

The above table, though generally correct, admits of some trivial exceptions, which have been created in the cases of small hereditaments and tenancies of trifling duration. These exceptions will be most conveniently considered under the head of particular rates and taxes.

Tenant's Taxes in the Absence of Stipulations.—POOR RATES have been imposed on the occupier, as opposed to the owner of land, ever since the passing of the first Poor Law in the reign of Elizabeth. Those who occupy only a portion of premises are proportionately liable—if, indeed, the rest of the premises be vacant, they are liable for the whole; but lodgers are not considered part occupiers for the purposes of the Act. Their management remains in the hands of his landlord, to whom he is merely an inmate. It would appear, moreover, that when the owner of a house lets it ready furnished to a tenant, the former is considered its occupier for purposes of poor rating, on the ground that his keeping his furniture on the premises with a view to profit constitutes a beneficial occupation. But the point is not absolutely certain.

Payment of Rates by Outgoing or Incoming Occupier.—An outgoing or incoming occupier is liable for Poor Rates only in respect of the time during which he is actually in occupation.

A statutory exception has been introduced to the general rule above laid down as to the occupier's liability. By section 1 of the Poor Rate Assessment and Collection Act, occupiers of premises for terms not exceeding three months are entitled to deduct the amount of the poor rate paid by them from their rent. The landlord is encouraged by the return of a considerable percentage to enter into a written agreement with the overseers personally to pay the poor rate in cases where the ratable value of premises does not exceed a certain sum, in London £20, in Liverpool £13, in Manchester and Birmingham £10, in other places £8. The overseers are empowered, in the case of premises of the above value, to levy the rate directly on the owner on their own initiative. In both the latter cases, the occupier, it should be noted, still continues personally liable; but he is entitled, in case of his paying the rate either voluntarily or under compulsion, to deduct the amount from his rent.

Under assessed taxes are included HOUSE DUTY, COUNTY and BOROUGH RATES, HIGHWAY RATES, &c. These fall legally on the tenant. In cases, however, where the overseers have availed themselves of the discretionary powers given them by the Poor Rates Assessment and Collection Act, borough rates must be dealt with in a similar way.

GENERAL DISTRICT RATES, which are levied under the provisions of the Public Health Act, 1875, for the numerous purposes therein set out, are payable by the tenant, except in cases where (1) the ratable value of the property does not exceed £10, or (2) the premises are merely let on a weekly or monthly tenancy, or (3) the property is let in separate apartments, or when the rents become payable or are collected at any shorter period than quarterly. In these cases the owner may, at the option of the urban authority, be rated at a reduced estimate in place of the occupier.

WATER AND GAS RATES, as a general rule, are payable by the tenant. But in the case of premises situated in a district where the Waterworks Clauses Act of 1847 has been adopted by the local authority, the owner of property of a less annual value than £10 is liable for the water rate. In the case of tenancies created before the adoption of the Act, the owner is entitled, after its adoption, to recover from his tenant.

Landlord's Taxes in the Absence of Stipulation.—PROPERTY TAX is primarily payable by the tenant, who is entitled to make a deduction for the tax from his next payment of rent. A landlord refusing to allow a proper deduction is liable on each occasion to a penalty of £50.

The LAND TAX and SEWER RATES levied by Commissioners of Sewers, but not sewer rates levied in an urban district under the Public Health Act of 1875, fall in the first case on the tenant, and are recoverable by him from his landlord by deduction from his rent. As touching sewer rates, however, this is apparently true only in the case of extraordinary repairs; ordinary trifling annual expenses fall absolutely upon the tenant.

Rates and Taxes in Case of Express Stipulation.—It will be seen, from a perusal of the preceding paragraphs, that the legal incidence of rates and taxes occasions, in the absence of express stipulation, little or no

difficulty. It is, however, usual in almost all leases to insert certain covenants on the landlord's behalf; the object of such covenants being to procure for the latter the payment of an absolutely net rent by throwing on the tenant the burden of those payments for which the landlord would be otherwise liable. In the case of ordinary rates and taxes, this common course is unobjectionable even from the tenant's point of view. It matters nothing whether the tenant pays £100 rent, whilst the landlord bears the burden of his own rates or taxes; or whether he pays the latter impositions to the amount of £20, whilst his nominal rental is reduced to £80. In the case, on the contrary, of those extraordinary and unexpected burdens which are sometimes imposed directly on the landlord under the provisions of various Acts of Parliament, a real hardship arises for the tenant who has innocently shifted the burden on to his own shoulders by an injudicious covenant. Thus a lessee sometimes finds himself liable, perhaps at the very end of his term, perhaps in a term of very short duration, to contribute a very heavy sum for some permanent improvement—the construction of a sewer, for instance, or the making up of a hitherto unpaved road—to property in which he himself has only a trifling interest.

Should the tenant intend to take on himself those landlord's taxes which are of a usual and recurring nature, but not intend to take the responsibility for extraordinary charges imposed in respect of permanent improvements to the freehold, the lease would probably contain some such clause as this: "to bear, pay, and discharge all rates, taxes, and assessments which may be assessed or imposed in respect of the demised premises". This covenant renders the tenant liable for the landlord's land-tax, and any similar impositions of a recurring character, but not for special assessments under local acts—paving and sewering charges, for instance, under the Metropolitan Management Acts—or for money due in respect of other extraordinary and permanent improvements to the property.

The tenant, in order to render himself liable for these additional assessments, must add something further to this typical covenant. Such addition is clearly constituted by what are called "words of indemnity", as when the lessee further undertakes to bear all "burdens" or "outgoings" imposed in respect of the premises—phrases which would appear to cover all possible contingencies. The words "charges" and "duties" sometimes, though not always, operate in a similar manner.

Frequently also the following additions are made at the end of the typical covenant—"or upon any person in respect thereof", "or upon the lessor in respect thereof", "or upon the landlord or tenant in respect thereof". Such additions, says a high authority, will not of themselves have the effect of throwing liability upon the tenant.

A covenant to pay the landlord's taxes may also be implied from the covenant to pay rent, or from the wording of the *reddendum*, as where the tenant agrees to pay his rent "clear of all taxes, charges, and impositions", or "without any deduction or abatement", or "free of all outgoings", or a "net" rent simply. Such expressions undoubtedly throw on the tenant

the burden of the landlord's usual and recurring taxes, but probably not that of charges for the permanent improvement of the property.

Under no circumstances can the LANDLORD'S PROPERTY TAX be shifted on to the tenant, and any attempt to do so by covenant is absolutely void. Similarly, the burden of a TITHE RENT CHARGE, in tenancies created on or subsequent to March the 26th, 1891, is inalienable from the landlord. In all other cases, with the exception of extraordinary tithe rent charge, which need not be dealt with here, it is free to the parties to adjust the burden of rates and taxes exactly as they please.

SUB-LETTING.

Tenants are free at Common Law to assign or sub-let, and covenants depriving them entirely of this liberty, though sometimes inserted, should always be strenuously resisted. A modified covenant, however, forbidding the tenant to assign or sub-let without the previous consent in writing of his landlord, coupled with a proviso that such consent is not to be unreasonably withheld, is at once equitable and usual. It has been held under the above circumstances, that where consent is withheld unreasonably, the tenant is free to disregard the covenant and legally assign or sub-let. Covenants are also frequently inserted against carrying on a particular trade on the premises, or obnoxious trades in general.

A sub-lessee stands in no relation whatever to his superior landlord; but his position to his immediate landlord is practically identical with that in which an ordinary tenant and landlord stand to one another, and the covenants in his under-lease naturally reflect those inserted in the original lease. The distinction between an assignee and a sub-lessee is this, that while a sub-tenancy may be created for any period less than the original term, it is not possible to take over the whole of the term except under an assignment. The assignee becomes liable for some, but not necessarily all, of the covenants contained in the lease, according to their respective natures, and thus stands in a direct and immediate relation to the superior landlord. It is impossible here, owing to considerations of space, to do more than formulate very briefly the kinds of covenants on which the assignee does or does not become liable.

It will be seen that the deciding principle depends partly on the form in which the covenant is cast, partly on the subject matter with which it deals.

(1) Covenants dealing with the demised premises as they actually existed at the time of the demise—things *in esse*, as they are called, as, for instance, a covenant to repair an existing building—bind the assignee, whether the covenant be or be not framed so as expressly to include assigns.

(2) Covenants dealing with the demised premises, but not with respect to things *in esse* at the time of the demise, as, for instance, a covenant to build a house on the land and keep it in repair when built, only bind the assignee when assigns are expressly mentioned, but not otherwise.

(3) Covenants which do not deal with the demised premises at all—

collateral covenants, as they are called, as, for instance, a covenant to build a house on a separate piece of land—do not bind the assignee, even when assigns are expressly mentioned in the wording of the covenant.

Not only, however, is the assignee liable on certain covenants, according to their subject matter and form, but he is similarly entitled to the benefit of the lessor's covenants, according to the same distinctions.

All assignments of leasehold interests are required by the Statute of Frauds to be in writing, and signed by the party assigning, or by his agent, who must hold a written authority. And by a later statute all such assignments must now be made by deed. A sub-lessee is entitled to call for the lease and the title thereto of his *immediate* lessor before becoming a party to the under-lease, even in the absence of special stipulation.

Payment of Ground-rent by Sub-tenant.—Sub-tenants are liable to distress at the hands of a superior landlord in cases where their immediate landlord has failed to pay his ground-rent. Should they, therefore, elect to pay the latter rent, in order to avoid distress, such payment is considered payment, so far as it goes, of their rent to their immediate landlord. In the case of lodgers, such payment must be made under the provisions of the Lodgers' Goods Protection Act, 1871.

GOOD TITLE AND QUIET ENJOYMENT.

It was once thought that covenants, alike for good title and for quiet enjoyment, were implied from the bare relationship of landlord and tenant; as also from the presence of certain words employed in creating the tenancy. The doctrine, however, on this point, is now much restricted; and though there may still be room for doubt, it is safe for all practical purposes to lay down the law as follows: A covenant for quiet enjoyment against the whole world, but limited to the duration of the lessor's estate, is implied by the word "demise", but not by the bare relationship of landlord and tenant, and probably not by the use of any other word whatever. Just possibly a covenant for title is also involved in "demise"—not in any other word—but the point is very uncertain.

Covenants for good title are seldom inserted; but covenants for quiet enjoyment, *limited to the acts of the lessor and of those claiming under him*, are commonly found in leases. These latter covenants, on the well-known principle, "an express covenant excludes an implied one", negative the absolute covenant against all the world otherwise implied by the word "demise", and are so far less beneficial. On the other hand, unlike the covenant involved in "demise", they continue during the whole of the lessee's interest, and are not limited to the lessor's estate.

DETERMINATION OF TENANCIES.

Tenancies may be brought to an end in six different manners: (1) by efflux of time; (2) by notice of the parties; (3) by surrender of the tenant; (4) by forfeiture; (5) by merger; and (6) by disclaimer of a trustee in

bankruptcy. With regard to (1), so soon as the specified period has expired, the term is at an end without any previous notice on the part of landlord or tenant. One point, however, calls for attention. A lessee who is tacitly allowed to continue in possession after the determination of his lease, is considered a tenant at sufferance; but should he tender, and his landlord accept, a yearly payment of rent, he becomes thereby a tenant from year to year. In such a case he will be held to be in possession under all the covenants of his expired lease, so far as the latter are compatible with the nature of his present holding.

Determination (5) by merger, and (6) by disclaimer, are exceptional conclusions to a lease which do not call for discussion here.

By Notice of the Parties.—Yearly tenancies, as already seen, can be determined by either of the parties, on giving a previous six-months' notice, at the end of any number of complete years from the date of their inception. In cases to which the Agricultural Holdings Act, 1875, applies, a twelve-months' notice is necessary; but these are tenancies which fall outside the scope of the present article. In cases where a yearly tenancy has commenced on one of four usual quarter-days, it is sufficient to give a clear two quarters' notice, even though the two quarters amount, together, to a period less than the strict half-year. It is sufficient, for instance, in the case of a tenancy commencing on the 25th March, to give notice on or before, but not later than, the 29th September. When tenants enter in the middle of a quarter, but the rent is paid on the usual quarter-days, special provisions apply in reckoning the necessary time of notice. It is better that the notice should be in writing and its service personal, though neither point is essential. Service on a servant at the tenant's dwelling-house, provided that the nature of the notice be properly explained, would seem to be sufficient.

Termination by Surrender is of two descriptions: (*a*) by the act of the parties; (*b*) by operation of law. Neither kind, perhaps, is of frequent occurrence, except in the single instance of landlord and tenant mutually agreeing to give up an old lease, in order to replace it by a new one. The tenant, it need scarcely be added, is not, under ordinary circumstances, entitled to get rid of his lease, except with the express or tacit acquiescence of his landlord. Prior to the Statute of Frauds, leases could be surrendered, just as they could be created, by a merely oral arrangement; but now all surrenders by act of the parties must be put into writing, and many must be by deed.

Surrender by act of the law may be accomplished in more ways than one, but it will be sufficient to call attention here to the commonest form of its occurrence. Landlord and tenant sometimes concur in executing a fresh lease during the continuance of a tenancy, without being at the trouble formally to extinguish the old one. In such a case the original tenancy is constructively considered surrendered, inasmuch as the granting and acceptance of the new term necessarily implicates on either side the abandonment of the old.

By Forfeiture.—A proviso is inserted in every properly-drawn lease enabling the lessor to re-enter and determine the tenancy in the case of non-payment of the rent or of breach of any of the lessee's covenants. The exercise of this power is entirely optional. A landlord, in the event of non-payment of his rent or of a breach of covenant, is free to elect whether he will determine the tenancy under the power of the proviso, or whether he will allow it to continue, and will waive the cause of forfeiture. But having once made his election, he is not afterwards free to depart from it. If, for instance, he has ordered the tenant to quit, or has issued a writ in an action for eviction, he must be taken to have made up his mind to treat the tenancy as determined; and he is not afterwards at liberty to treat it as still subsisting. If he is afterwards willing that the tenant should still continue occupation, it must be on the footing of a new tenancy.

On the other hand, he is no longer entitled, when once he has waived the cause of forfeiture, to determine the tenancy on that particular ground. Waiver may arise, not only from the express, but also from the implied, intention of the lessor. Any act, in short, of the landlord which can be fairly construed as exhibiting an intention on his part to treat the tenancy as still subsisting, will be construed as a waiver. A lessor, for instance, who accepts, or even demands, rent which has accrued due since a breach of covenant of which he is cognisant, must be taken to have waived his right of re-entry. Such demand or acceptance is a recognition on his part that rent has actually become due, and this again involves the recognition that the tenancy is still in existence. Acceptance or demand of rent accrued due prior to the breach of covenant stands, of course, on a different footing. The waiver, however, applies only to those causes of forfeiture which have taken place before the waiver is committed; subsequent causes of forfeiture, of course, give rise to a new right of re-entry. Hence, in the case of what is called a *continuing* breach — *e.g.* leaving the premises uninsured or unrepaired for a continuing period—the acceptance of rent effects a waiver of the breach only up to the time when the rent thus accepted actually became due, and the lessor does not thereby lose his right of re-entry in respect of the continuance of the breach after that date.

Forfeiture has always been abhorrent to the law, which, even prior to 1881, extended a measure of relief to the tenant in the case of non-payment of his rent and breach of his covenant to insure. As to rent, the question is still regulated by section 102 of the Common Law Procedure Act, 1852, which enables the landlord to recover the premises by action when half a year's rent is in arrear, and no sufficient distress can be found on the premises, without any formal demand or entry, at the expiration of the time limited by the proviso. But all proceedings are to cease on payment by the tenant, at any time before the trial, of all arrears and of the costs of the proceedings. And the tenant is also entitled to relief on application to the Court on payment of all arrears and costs within six calendar months from the date of the execution of the judgment of ejectment. And now by the Conveyancing and Law of Property Act, 1881, he is given yet further

protection. By section 14, sub-section 1, of that statute (which does not, however, apply to re-entry for non-payment of rent or breach of covenant not to assign or sub-let; or to a condition for forfeiture on the bankruptcy of the lessee, or on the taking in execution of the lessee's interest), it is enacted that no proviso for re-entry shall be enforcible by action or otherwise, until (1) the lessor has served on the lessee a notice specifying the particular breach complained of, and requiring him, if the breach be capable of remedy, to remedy the same, and in any case to give compensation in money; and (2) the lessee has failed, within a reasonable time thereafter, to remedy the breach, if the same be possible, and to make a reasonable compensation in money to the satisfaction of the lessor. The Court is also empowered, when the lessor is seeking to re-enter by action or otherwise, to grant such relief to the tenant as it shall deem fit, having regard to the circumstances of the whole case.

A tenant who wilfully and contumaciously holds over after demand and notice of his landlord is liable to pay double the yearly value (not necessarily the rent hitherto paid) of the premises demised. If he holds over after his own notice, he becomes liable for double the rent he has hitherto been paying.

Tenants Quitting during their Term.—Tenants quitting during their term—*e.g.* in the middle of a term of twenty-one years—or at the end of a year in a tenancy from year to year, without giving proper notice, continue liable on their rent and covenants till their term is legally completed, unless the landlord lets the premises to a new tenant, in which latter case the law assumes that the old tenancy has been surrendered.

LANDLORD'S LIABILITY FOR CONDITION OF FURNISHED HOUSE.

In the case of furnished houses the law assumes an undertaking on the lessor's part that they are reasonably fit for habitation—that they are free, for instance, from infectious disease, from bad drains, and from objectionable insects. This exception, however, applies only to the condition of things at the beginning of the tenancy, and is strictly limited to hirings of a temporary character—as in the common case, for instance, of taking country or seaside lodgings. Indications, in fact, are not wanting that the judges are unwilling further to encroach on the ancient Common Law principle.

LETTING INFECTED HOUSES OR LODGINGS.

By sect. 128 of the Public Health Act, 1875, any person who knowingly lets for hire any house, room, or part of a house in which any person has been suffering from any dangerous infectious disorder, without previously disinfecting the same to the satisfaction of a legally-qualified medical practitioner, and obtaining a certificate from the latter, shall be liable to a penalty not exceeding twenty pounds. Furthermore, by sect. 129, any

son l ting for hire or showing for that purpose any house or part of a house, who, on being questioned by any person negotiating for its hire as to the fact of there being, or within six months previously having been, therein any person suffering from any dangerous infectious disorder, knowingly makes a false answer to such a question, shall be liable to a penalty not exceeding twenty pounds, or to imprisonment with or without hard labour for a period not exceeding one month.

The Infectious Diseases Act, 1890, further provides that: "Every person who shall cease to occupy any house, room, or part of a house in which any person has within six weeks previously been suffering from *any infectious disease*, without having such house, room, or part of a house, and all articles therein liable to retain infection, disinfected to the satisfaction of a registered medical practitioner, as testified by a certificate signed by him, or without first giving to the owner of such house, room, or part of a house, notice of the previous existence of such disease, and every person ceasing to occupy any house, room, or part of a house, and who, on being questioned by the owner thereof, or by any person negotiating for the hire of such house, room, or part of a house, as to the fact of there having within six months previously been therein any person suffering from any infectious disease, knowingly makes a false answer to such question, shall be liable to a penalty not exceeding ten pounds."

This Act only operates in those districts in which it has been adopted by an urban or rural authority.

The term "infectious disease" "means small-pox, cholera, diphtheria, membranous croup, erysipelas, the disease known as scarlatina or scarlet fever, and the fevers known by any of the following names: typhus, typhoid, enteric, relapsing, continued, or puerperal", and includes, as respects any particular district, any other infectious disease to which the Act has been extended by the authorities.

RIGHTS OF LODGERS.

Unless otherwise stipulated at the time of hiring, a lodger has the right to the use of the door-bell, the knocker, the skylight on the staircase, and the water-closet. If he is deprived of these privileges his remedy lies not in refusing to pay the rent, or in withholding any part of the rent, but in an action against his landlord for breach of contract.

Unlike the innkeeper, the lodging-house keeper is not responsible to the lodger if any property be stolen from his rooms.

II. IN SCOTLAND.

THE LEASE.

In a general way it may be said that a lease is the same contract in England as in Scotland. But in the details and manner of constituting the contract, and in the obligations imposed by law on the parties to it, the differences between an English and a Scotch contract of lease are so great that it is necessary to treat them under entirely separate heads in order to prevent confusion or mistake.

Where the subject let is mainly the use of the land, its produce or what is naturally in or below it, the lease is called a rural lease, even although the land should be situated within the town; and the rules of law as to rural leases are different in many important respects from those that apply to urban leases. Therefore it must be observed carefully that the rules here given are not to be taken as applying to leases of farms or agricultural lands, or indeed anything but "urban subjects", which are defined as buildings or dwelling-houses whether in town or country not merely accessory to the cultivation or use of lands.

WHO MAY GRANT VALID LEASES.

Granter's Title.—The granter of a lease should be "infeft" in the lands, that is, his title as proprietor should be formally completed according to feudal law. Practically this now means that his title should be properly recorded in the Land Registers. If the landlord's title is not thus completed, on his death the lease will not be binding on any one succeeding to the ownership of the property not as his representative, but independently of him, for example, as heir of entail and in certain other ways.

Effect of a Bond.—The existence of a bond and disposition in security over the subjects is no obstacle to the granting of a lease by the owner.

Married Women.—If the owner of the subjects is a married woman, the consent of her husband must be obtained to the lease unless his *jus mariti* and right of administration have been excluded by ante-nuptial contract or other deed. This rule is not altered by the Married Women's Property (Scotland) Act, 1881, which only affects the husband's right to deal with the rents or produce of the wife's heritable property,[1] not with the property itself, when the marriage has taken place subsequently to 18th July, 1881. Indeed, a husband can grant leases of his wife's estate without her consent unless his *jus mariti* and right of administration have been excluded, but such leases cannot last longer than his own administration of his wife's estate. On the other hand, when these rights of the husband are excluded, a married woman can grant effectual leases without his consent.

[1] "Heritable property" in Scotland corresponds generally with "real estate" in England.

Pupils.—Pupils, that is, boys under fourteen and girls under twelve years of age, cannot enter into contracts, and if the owner of heritable subjects belongs to this class the lease must be granted by the pupil's tutor or administrator-in-law on behalf of his ward. Tutors, however, cannot grant leases of their pupils' estate to endure longer than their own term of office without obtaining the authority of the court.

Minors.—A minor, a person not a pupil, but under twenty-one, may, if he has no curators, grant a lease, but the contract can be set aside if there be "enorm lesion", that is, if it be seriously to his disadvantage. If a minor has a curator, the curator's consent is necessary to the lease.

Trustees.—Heritable property in Scotland is very largely in the hands of trustees. At Common Law trustees have power to grant leases of the heritable estate under their charge for an ordinary term of endurance, provided there is no prohibition, express or implied, in the trust-deed against their doing so.

Entailed Estates.—An heir of entail in possession can, in the ordinary course, grant leases to endure for a usual period if they contain no provision conferring greater benefits upon him than on his successors. But he cannot without special powers under Act of Parliament, or without the consent of all the heirs whose consent would be necessary to a disentail, let the home-farm, mansion-house, or policies for a longer period than his own life.

Life-renter.—A person life-rented in an estate can only grant leases to endure during his life-rent, but in the case of the life-renter's death the lessee is entitled to remain in possession of the subjects let until the following Whitsunday.

Heritable Creditor.—It frequently happens that the holder of a bond and disposition in security over land or houses, when the owner is unable to pay up the bond, enters into possession of the subjects under an action of maills and duties, and administers the property as if he were the proprietor. Any creditor in this position may grant leases for a period not exceeding seven years. He may also grant leases for a longer period if he obtains the authority of the sheriff in the manner prescribed in the Heritable Securities (Scotland) Act, 1894. The limit in all cases, however, is twenty-one years for heritable property in general and thirty-one years for minerals.

HOW A LEASE IS CONSTITUTED.

The Foundation of a Lease.—The foundation of the contract which will create the definite relationship of landlord and tenant is an agreement between the lessor and the lessee, that the lessee shall have the use of the heritable subject for a specified time from a specified date in return for a definite payment. If these points are fixed the other obligations of the parties are determined by law, but the parties may by express agreement vary or restrict these obligations in almost any way they please.

The first point to be observed in regard to the constitution of a lease is that it must be in writing in the form of a probative deed, that is, one

executed with all the solemnities required by law. The only exception to this rule is in the case of leases for a year or less, which may be constituted by word of mouth.

There is, however, an important modification of the rule requiring probative writing to constitute a lease, for an informal writing may be sufficient to establish a lease for any period, if *rei interventus* has supervened, that is, if either of the parties, on the faith of the agreement and in pursuance of it, has done something which would make the application of the rule a distinct breach of good faith.

It must be observed, however, that the proof of a verbal lease for more than a year must be by writings, however informal, showing the contract, or by the defender's oath. But no prudent person will omit the precaution of having a formal lease framed if it is to endure for more than a year.

A lease often takes the form of missives consisting of a letter of offer and a letter of acceptance, and these, if probative, are as effectual as a single deed signed by both parties.

Even a promise or undertaking to grant a lease, with an acceptance by the lessee, will be effectual to prove a contract of letting if the documents are formally executed.

Stamping.—Written leases must be properly stamped, otherwise they cannot be produced as evidence in Court. The stamps required are the same in Scotland as in England, and the reader is referred to the table of stamp-duties given on page 56.

An agreement for a lease must bear the same stamp-duty as if it were an actual lease for the term and consideration mentioned in the agreement, and any lease made subsequently in conformity with such an agreement only requires a sixpenny stamp.

It may be useful to give here a form of an ordinary lease of a dwelling-house, though where a formal written lease is entered into it is prudent, of course, for the tenant to employ a solicitor.

FORM OF LEASE OF DWELLING-HOUSE.

This lease between A (**designation of the landlord**), heritable proprietor of the dwelling-house after-mentioned, of the first part, and B (**designation of the tenant**), of the second part, Witnesseth that the said A, in consideration of the rent or tack-duty after specified, has set, and hereby lets to the said B and his heirs, but excluding assignees and sub-tenants except such as may be approved of by the said A in writing, All and Whole that dwelling-house (**here describe the house, and garden or other pertinents**) and that for the space of years from and after the term of , which is hereby declared to be the said B's entry thereto: In the peaceable possession of which subjects the said A binds and obliges himself and his heirs and successors to maintain and defend the said B and his foresaids during the currency of this tack at all hands: And the said A also binds and obliges himself and his foresaids to keep the said house wind and water

tight and in proper tenantable condition during the whole currency of this lease: For which causes, and on the other part, the said B binds and obliges himself, his heirs, executors, and representatives whatsoever, to pay to the said A, his heirs and successors, the sum of £ sterling yearly of rent, at two terms in the year, Whitsunday and Martinmas, by equal portions, beginning the first term's payment thereof at the term of next for the half-year preceding and the next term's payment at following, and so forth half-yearly and termly during the currency of this lease, with a fifth part more of each term's payment of liquidate penalty in case of failure, and interest of the said rent at the rate of Five per centum per annum from the said respective terms of payment during the non-payment of the same: And the said B accepts the premises hereby let as being in good order and repair, and binds himself and his foresaids to leave the premises in the like good order and repair at the expiry of this lease, ordinary wear and tear excepted: And the said B binds and obliges himself, his heirs and successors to remove at the expiry of this tack without warning or process of law to that effect; And both parties oblige themselves and their foresaids to perform the premises to each other under the penalty of £ to be paid by the party failing to the party performing or willing to perform over and above performance: And both parties consent to registration hereof for preservation and execution. In Witness whereof (here follows the "testing clause" containing the dates of signature of the lease and the names and designations of the witnesses).

SUB-LETTING AND ASSIGNING.

It should be observed that, if nothing is said in the lease about sub-letting and assigning, in urban leases the tenant will be entitled to assign and sub-let.

In leases of agricultural lands or other "rural" subjects the rule is different, and in the absence of express stipulation the tenant is not entitled to sub-let or assign. The Registration of Leases Act, 1857, confers certain privileges upon leases for thirty-one years or longer.

Furnished Houses.—In the case of a lease of a furnished house the tenant has no power to sub-let or assign without an express stipulation in the lease.

TENANT'S RIGHTS UNDER A LEASE.

Assuming that a lease in the ordinary terms has been completed either verbally (if for one year) or in writing, we will consider the rights and obligations of the tenant thereunder.

Possession.—1. In the first place he is entitled to possession of the whole subjects let at the stipulated term, and is therefore entitled to eject according to the forms of law any person occupying them; or he can require

the landlord to do so. If the landlord delays to give possession for an unreasonable time the tenant may cancel the bargain. The reservations which a landlord may make expressly when letting lands belonging to him are of endless variety. Freedom of contract is so complete that almost any agreement that the parties are likely to enter into deliberately and expressly will be binding upon them.

There is an implied reservation to the landlord of a house of a right of access for the purpose of executing necessary repairs.

2. The tenant must be maintained in possession.

If the tenant is evicted or deprived of possession by a third party, he is entitled to complete indemnification for all the loss he has sustained or will sustain through being deprived of his lease. If he is evicted from the whole subjects let, he can claim from the lessor the total value of the lease to him at the time he is evicted. If he is deprived only of part of the subjects he is entitled to claim damages, which will usually result in an abatement of the rent. But if the eviction, although not absolutely from the entire subjects let, be to an extent which renders them unfit for the occupancy or use for which they were intended, the tenant is doubtless entitled to throw up the lease entirely.

Accidental Injury or Destruction.—If, however, by the lawful act of some one for whom the lessor is not responsible, by a neighbour, for instance, building on his own ground, the premises be injured or rendered less suitable for the purpose for which they were let, the tenant has no claim against the lessor, unless there be a special guarantee in the lease.

If the landlord himself does something to detract from the tenant's use of the subjects let, an abatement from the rent will be allowed by the Court.

If part of the subjects let be destroyed or rendered permanently useless by unavoidable accident, as, for instance, by being struck by lightning, the lessee will be entitled to an abatement of rent. The law in regard to the destruction of the subjects by other accidents due to the fault of neither lessor nor lessee is generally the same as in the case of inevitable accident. Of course, if the accident is due to the fault of either landlord or tenant, he who is in fault must bear the loss thereby caused.

If the house be destroyed by inevitable accident, the rule of law is that the landlord cannot be required to restore it, and the tenant may abandon the lease if the subject be totally destroyed, or claim an abatement of the rent if it be only partially destroyed.

Injury by Fire.—The commonest accident which calls for the application of this rule is injury or total loss by fire, and this event is usually guarded against by insurance. But in the absence of express stipulation in the lease, there is no obligation upon the landlord to insure the house, and the tenant is not at all likely to do so. He will, of course, insure the effects belonging to him in the house, for the landlord has no responsibility in that matter, and the insurance effected on the house itself by the landlord does not cover the property of the tenant.

Even where the tenant is bound by the lease to keep the house in

tenantable and habitable condition, and leave it so at the expiration of the lease, neither he nor the landlord is bound to rebuild or restore the subjects destroyed by an accident for which neither is responsible.

It is sometimes difficult to determine whether a tenant whose house has been injured by an accident of the kind, is entitled to abandon his lease or only to claim an abatement of the rent. In general, if the house be rendered uninhabitable or untenantable, the lessee may throw up the lease unless the landlord offers to put the house into habitable condition within a reasonable time.

If the tenant decide to abandon his lease, he must intimate his intention to the landlord without undue delay.

Insurance.—Neither party is bound to insure unless there is a stipulation in the lease to that effect.

TENANT'S OBLIGATIONS.

The Tenant's Obligation to Take and Retain Possession. — The landlord being bound to give possession, the tenant is bound to take it. Therefore any person entering into a lease of a house as tenant is bound to occupy it, and prevent it from deteriorating by being left empty. The landlord is further entitled to insist upon the tenant's putting in sufficient furniture to secure the hypothec, and upon his keeping up fires, and properly airing it to prevent injury from damp.

Payment of Rent.—The tenant must not only pay his rent, but must also pay it to the right person. This will not always be the party who let him the house, for the landlord may have sold the property or assigned the rents. The only case where the tenant can commonly have any difficulty is probably when a bondholder steps into the place of the landlord, and administers the property, letting the subjects, and drawing the rents. The tenant, however, will receive intimation of such a proceeding, and he cannot, after receiving such intimation, pay the rent to the landlord without being liable to pay it over again to the creditor.

Management.—The tenant of a dwelling-house may not, of course, destroy or injure the premises let, for he is bound to restore them to the landlord at the end of the lease in the condition in which he received them, except for "ordinary tear and wear", as leases commonly express it. He is not bound to make good deterioration resulting from the ordinary and natural use of the premises, unless under special stipulation. He is bound to use the premises only for the purpose for which they were let. It is usual to state explicitly in a lease of a house that it is to be used only as a dwelling-house, and when that is done the tenant is not entitled to use it for trading purposes.

The tenant is not entitled to erect buildings, or make structural alterations in the subject let even although there be no express stipulation in the lease against his doing so.

REPAIRS.

In Scotland the landlord is bound to put the house into habitable and tenantable condition (at the beginning of the lease) when the tenant enters it. This, the Common Law rule in Scotland, is made also statutory, in regard to houses let to the working classes, by the Housing of the Working Classes Act, 1885.

Further, the landlord is bound to keep the house in tenantable condition during the lease unless there be an express stipulation to the contrary. But if the house is injured or destroyed by the fault or negligence of the tenant, the landlord cannot be required to repair the damage so caused. Or if the house be injured or destroyed by unavoidable accident, the landlord is not bound to restore it. If he refuse to restore, the tenant may abandon the lease.

If the landlord decline to make necessary repairs arising in ordinary course, the tenant may execute them himself and deduct the cost from the rent.

If the landlord fail in his duty to make the house habitable at the tenant's entry, or to keep it in repair during the lease, he may be held liable for any damage caused thereby.

Should the tenant on entering the house find it in an uninhabitable condition, he may refuse to take possession and throw up the lease if the landlord does not promptly put it in order. It is impossible to define accurately an uninhabitable condition. But the presence of vermin in considerable numbers, dampness rendering the use of rooms dangerous to health, or radical and dangerous defectiveness of drainage, would entitle a tenant to abandon his lease if the landlord did not promptly remedy these defects.

FURNISHED HOUSES.

The ordinary rules in regard to leases do not apply in every respect to the letting of furnished houses. It is obvious that in the lease of a furnished house there is a wider contract than in the mere letting of the heritable subject, the house itself, for there is also a contract of hiring or location of the furniture. As a rule there is no formal lease, though commonly missive letters pass between the parties.

One important point is that the landlord of a furnished house is liable for all taxes and rates exigible from the tenant, unless there is a special stipulation to the contrary.

When entering into a lease of a furnished house, each of the parties should have an inventory of the contents of the house, and if anything is broken, or cracked, or in defective condition, the fact should be carefully noted in the inventory. The rent is commonly payable in advance.

FIXTURES.

When a proprietor lets a dwelling-house it usually contains certain movables annexed by him to the premises. These are called "landlord's fixtures", and they vary in quantity and in kind according to local custom and to the class of house. The tenant will see what is in the house before he takes it, and he should stipulate for what he thinks necessary in the way of landlord's fixtures before entering into the lease.

Right to remove Fixtures.—"Tenant's fixtures" are those movables attached by the tenant to the house, which he is entitled to remove at the expiration of his lease. These do not include all fixtures which he may have put up, for if he annex or infix anything to the house itself in such a way that it cannot be removed without injury to the structure of the house, it becomes, as a general rule, the property of the landlord, and the tenant cannot thereafter remove it.

In regard to the question of what fixtures may be removed by a tenant at or before the expiration of his lease, this is one of the few points in which the laws of England and Scotland are practically identical. Therefore it seems unnecessary to repeat here what has been laid down above for the guidance of the householder in England in regard to this matter, and the reader is referred to the statement of the English law on this subject.

LANDLORD'S REMEDIES FOR RECOVERY OF RENT.

In addition to the remedies which an ordinary creditor has for recovering payment from his debtor, a landlord has a number of special remedies. These are summary diligence following on a decree of registration; an action of maills and duties; and sequestration.

Summary Diligence.—If a formal lease has been entered into, the last clause of it may declare that "the parties consent to the registration of the deed for execution". If the lease contains this clause the landlord may register it in the Books of Council and Session, or in the Sheriff Court Books, and obtain a warrant which entitles him, if the rent be unpaid, to arrest goods, debts, or money belonging to the tenant, and, after giving the tenant, by a messenger-at-arms or sheriff-officer, a "charge" or formal notice to pay, to poind or distrain the tenant's goods.

The days of charge are fourteen in cases of edictal citation, and six in other cases.

This remedy, however, is not familiar in practice.

Action of Maills and Duties.—The landlord, again, may present a petition to the Court to have the debtor in the lease, or his tenants, ordained to pay over the rents due by them to the landlord as they become due. This remedy is more frequently resorted to by a heritable creditor or bond-

holder, who by virtue of his bond takes the place of the landlord, as explained above.

Hypothec.—The remedy which is most commonly made use of by a landlord to obtain payment of his rent, is sequestration of his tenant's furniture and effects. This remedy is based on the landlord's right of hypothec, which is a security created by law, in favour of the landlord, over the furniture and effects belonging to the tenant in the subjects let, independently of any agreement or stipulation between the landlord and tenant. The right has been much curtailed by recent legislation in rural subjects, but it still exists undisturbed in leases of urban subjects—dwelling-houses, shops, factories, and warehouses. It has been abolished in leases of agricultural or pastoral lands exceeding two acres in extent, except where rent is due under a lease, writing or bargain, current at Martinmas, 1881.

In urban tenements the landlord's right of hypothec covers all the goods the tenant brings into the premises, including, but not limited to, all furniture, books, paintings, plate, jewels, and other movable property not belonging to the landlord. There are some exceptions, however, and doubtful questions as to what comes under the hypothec often arise. It is generally recognised that cash, bonds, bills, and other documents of debt are not subject to hypothec, nor is the tenant's wearing apparel.

When articles or goods do not belong to the tenant they escape the landlord's right in some cases, but not in all. Hired furniture is generally liable to sequestration for rent if it forms the bulk of the furniture in the house. Single articles of a kind that are commonly let on hire, and not of the nature of ordinary furniture, do not, Mr. Rankine thinks, come under the hypothec, "especially", he says, "if there is a known custom of hiring out similar articles by themselves, and as part of a business different from furniture-broking, as in the case of sewing-machines and musical instruments, such as pianofortes". Lord Deas in one case said, "I am not aware of any authority for holding that forms hired for an evening party, or china for a dinner party, may be sold for payment of the rent, although they happen to be in the house on the day sequestration is used".

Goods merely deposited in the premises let, or lent gratuitously to the tenant, are in a more favourable position than hired articles. Articles belonging to inmates of the house other than the tenant are exempt from the operation of hypothec, if they are not of the nature of general household plenishing, such as might be brought into the house by a sub-tenant, who is not merely a lodger. Articles of personal use belonging to children, guests, lodgers, servants, and such inmates of a house do not fall under the hypothec.

Duration of Hypothec.—The right of hypothec gives security to the landlord only for each successive year's rent, and not for arrears. It must be made good by sequestration within three months of the last term of payment, against effects that have been in the premises during the year.

Superior's Hypothec.—The superior of the ground, that is, the person

entitled to uplift the feu-duty, has also a right of hypothec, which entitles him, in the event of the feu-duty being unpaid, to "poind the ground", that is, to attach for payment of such feu-duties as have accrued during the tenant's possession not only the landlord's (his vassal's) goods, but also the goods of the landlord's tenants. If, however, the tenant has paid his rent to his landlord *bonâ fide*, the superior's right to poind is defeated.

Landlord's Right to retain Tenant's Furniture.—The landlord is entitled to prevent his tenant from displenishing the premises during the currency of the lease, and, if the tenant is removing or about to remove the furniture from the premises, the landlord is entitled to apply to the Court for interdict, and so to prevent him from taking away his goods.

The landlord can take this step not only after the rent has become payable, but also at any period of the lease. Before the rent has become payable, however, a tenant, if he finds caution or security for it, will be allowed to remove his goods, unless such removal is inconsistent with good management of the subject let, an important consideration in farms and other "rural" leases. But after the rent has become due the removal or a poinding by a creditor of the landlord may proceed only on payment of the rent, or if sufficient for the purpose is left.

Further, if goods belonging to the tenant have been removed from the premises before the hypothec expires, the landlord can obtain a warrant from the sheriff to search for and bring them back.

Sequestration for Rent.—The landlord may therefore make good his right of hypothec over the tenant's goods in two ways, (1) by sequestration in payment of rent that is past due, and (2) by sequestration in security of rent to become due. We are speaking, it must be noted, of "urban" subjects as defined above.

If the term for the payment of rent is past, and three months from the last yearly term have not elapsed, the landlord may ask the Court to sequestrate the effects on the premises in question and to authorise an inventory of them to be made, and thereafter to grant warrant to sell them in payment of the rent. If the tenant has removed any of his furniture, the landlord may ask a warrant to bring back the articles removed.

Mode of Sequestration.—When this petition is presented, the Court sequestrates and grants a warrant to inventory the effects. This warrant is handed to an officer of court, who proceeds to the premises and in the presence of one witness makes an inventory of what he finds there. A copy of this inventory, certified by the officer and the witness, is returned to the Court. The Court then grants a warrant to sell the sequestrated effects by public roup at a date fixed by the sheriff or by some one appointed by him to carry through the sale.

When the sale is concluded, or within fourteen days thereafter, it must be reported to the court. Any balance remaining over after paying the landlord's claim and expenses is handed over to the tenant.

The landlord is also entitled to sequestrate in security before the rent is due if he has ground for believing that his rent is in danger through, for

example, the tenant's affairs becoming embarrassed, or the removal of the tenant's effects. If the rent is paid when it becomes due, the landlord must bear the expense of the proceedings, but if it is not paid he may apply for a warrant to sell and carry out a sale in the manner already explained.

Landlord's Right in Competition with Other Creditors.—In virtue of the right of hypothec the landlord has a preference for the rent of the premises for the year to which his hypothec applies over all the unprivileged creditors who, by poinding and arrestment, may interfere with the tenant's goods.

A purchaser of the hypothecated goods is bound to restore them or pay the value to the landlord, if the latter exercises his right of hypothec. But he need not do so if the purchase is made after the rent has become due, provided that sufficient goods remain in the premises to pay the rent. During the currency of the term, however, the landlord can prevent any interference with the hypothecated goods, no matter whether sufficient is left to meet the rent or not.

There are two modifications of this rule. Firstly, goods sold by bulk in open market cannot be recovered by the landlord; but this protection does not extend to goods sold by sample. Secondly, agricultural produce, by the Hypothec Amendment Act, 1867, if sold *bonâ fide* for its fair marketable value and removed from the premises and paid for, is protected, as is also the case when it is sold by public auction after seven days' notice to the landlord or his factor or agent without sequestration being obtained and registered before the expiration of the notice.

ENTRY.

Date of Entry.—The tenant's entry to the subjects let may be at any time the parties arrange, but in the better class of houses it is usually at the terms of Whitsunday or Martinmas, which are known as the legal terms. If a lease specifies either of these terms as the date of entry, it means either the 28th of May or the 28th of November. Until comparatively recently the custom in regard to entry and removal of tenants at these terms was not uniform, for in some counties and burghs in Scotland tenants entered or removed at a period beyond the date of the legal term. The matter is now regulated by the Removal Terms Act, 1886, which provides as follows:—

"Where under any lease entered into after the passing of this Act, the term for a tenant's entry to, or removal from, a house shall be one or other of the terms of Whitsunday or Martinmas, the tenant shall, in the absence of express stipulation to the contrary, enter to, or remove from, the said house (any custom or usage to the contrary notwithstanding) at noon on the twenty-eighth day of May, if the term be Whitsunday, or at noon on the twenty-eighth day of November, if the term be Martinmas, or on the following day at the same hour, where the said terms fall on a Sunday".

BREAKS.

It is not uncommon to stipulate in a lease that the landlord, or the tenant, or both, on giving certain notice to the other party, shall have the right to terminate the lease at a certain date before the date of expiration stated in the lease.

The break is in practice more frequently in favour of the tenant. Such a condition is usually clearly expressed, and should not give rise to any difficulty.

REMOVING.

The tenant is bound to leave the house at the term of removal stipulated in his lease, and if he delays to do so the landlord may compel him to vacate the premises by an action of Removing in Court.

In formal written leases there is always a clause by which the tenant binds and obliges himself and his successors to "flit and remove" from the premises thereby let at the expiration of the lease, "and that without any previous warning or process of law to be used against him to that effect".

Warning to Remove.—Notwithstanding this stipulation, however, the tenant is always, except in leases for less than a year, entitled to forty days' notice of the landlord's intention to require him to remove, and, on the other hand, he is bound to give the same notice to the landlord if he does not intend to remain in the house for another year. The notice on behalf of the landlord is called a "warning", and was commonly given by a sheriff-officer or "burgh officer". It may be given by the landlord himself or his agent. The rules as to removals from urban subjects formerly depended upon local customs, and were therefore different in different parts of the country. In burghs it is or was recently common for the officer to give notice by chalking "the most patent door of the building", in the presence of one witness, forty days before the term of removal. The notice, however, may now always be given by registered letter. It must be given at least forty days before the 15th of May or the 11th of November if Whitsunday and Martinmas are the terms in the lease, and it is common for the landlord to give warning on 1st of January or at Candlemas. Indeed it is regarded by many people as a grievance that landlords in the large towns of Scotland are accustomed to arrange as early as January or February the letting of their properties for the year from Whitsunday. In leases for four months or less the Removal Terms Act requires that notice of removal shall, in the absence of express stipulation, be given as many days before the date of ish (*i.e.* the termination of the lease) as shall be equivalent to at least one-third of the full period of duration of the lease.

The day on which a tenant must remove under a lease with the ordinary terms is, like the day on which he enters, fixed by statute, as was mentioned when speaking of the date of entry. If the lease specifies Whitsunday or

Martinmas as the date of termination the tenant must remove at noon on the 28th of May if the term be Whitsunday, or on the 28th of November if the term be Martinmas, or on the following day at the same hour if the term-day fall on a Sunday.

By the Sheriff Court Act of 1838 a summary method is provided for removing tenants who are in possession of premises let for less than a year at a rent not exceeding the rate of £30 per annum.

A person who occupies a house as part of a contract of service, and under an express stipulation that his tenancy is to cease when his contract of service expires, does not seem entitled to the benefit of a "lawful warning", and may be ejected summarily if the rent does not exceed the rate of £30 a year.

Notice by Tenant.—The tenant who intends to leave at the end of his lease must give the landlord the same length of notice as the landlord would have had to give him.

Tacit Relocation.—It is necessary to note carefully what happens if no notice be given on either side that the lease is to terminate at the date stipulated in the lease. Both parties are then bound for another year on the same terms as the last.

RATES AND TAXES.

In Scotland the apportionment of public burdens and taxes between landlord and tenant is sufficiently clearly regulated by law, and difficulty between the parties to a lease can hardly arise on this ground unless there is some stipulation in the contract altering the usual incidence of such burdens. In practice such a stipulation is unusual in leases of dwelling-houses. There is no reference to taxes in ordinary leases, except in leases of furnished houses, in which case all the taxes, both landlords' and tenants', are borne by the lessor.

STAMP-DUTIES ON LEASES.

The following stamp-duties are payable on leases in any part of the United Kingdom:—

(1) For any definite term not exceeding a year:

Of any dwelling-house or part of a dwelling-house at a rent not exceeding the rate of £10 per annum, ... 1*d.*

(2) For any definite term less than a year:

(*a*) Of any furnished dwelling-house or apartments where the rent for each term exceeds £25, ... 2*s.* 6*d.*

(*b*) Of any lands, tenements, or heritable subjects, except or otherwise than as aforesaid, the same duty as a lease for a year at the rent reserved for the definite term.

(3) For any other definite term or for any indefinite term:

Of any lands, tenements, or heritable subjects—

When the consideration, or any part of the consideration, moving either to the lessor or to any other person, consists of any money, stock, or security:

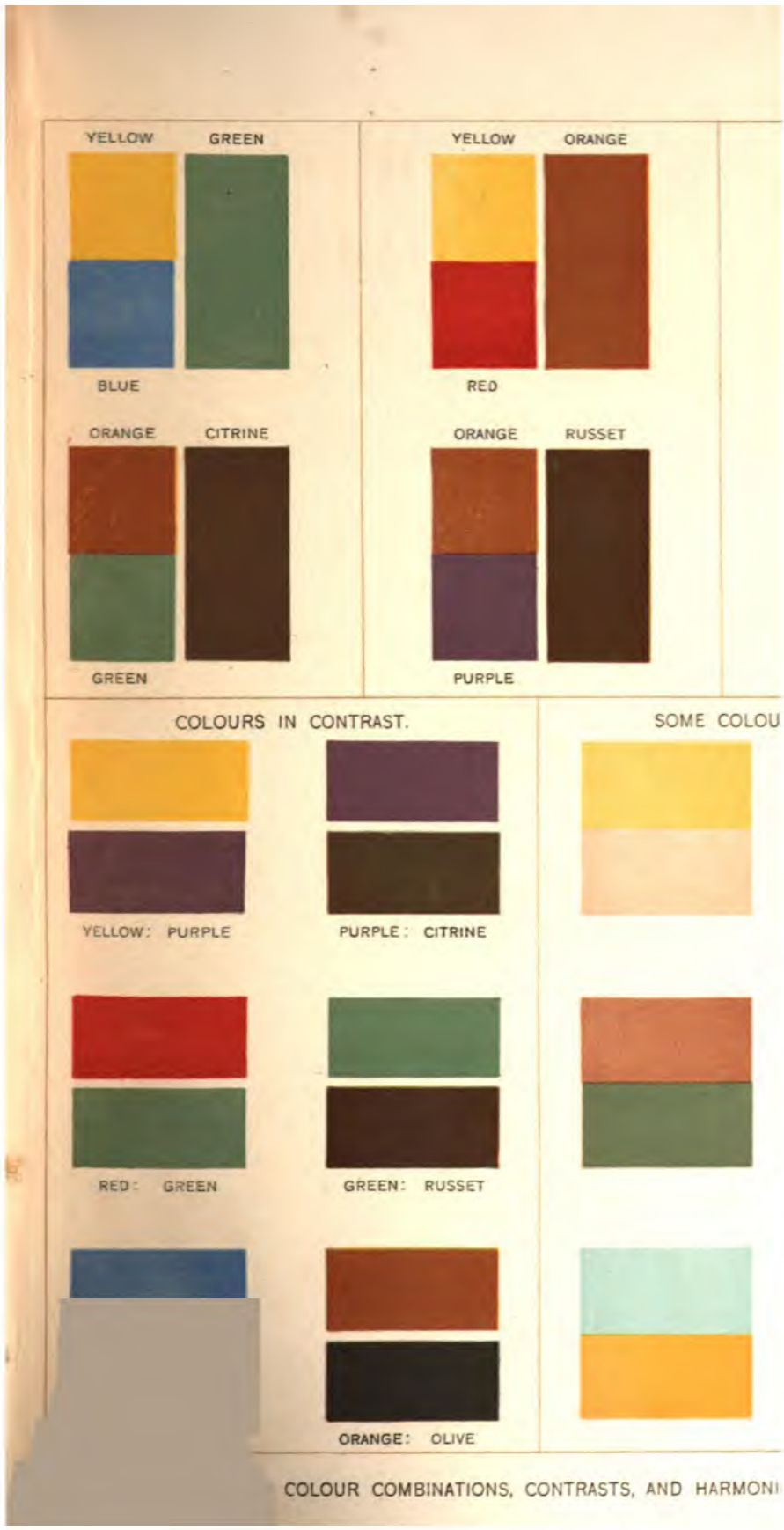
In respect of such consideration, the same duty as a conveyance on a sale for the same consideration.

When the consideration, or any part of the consideration, is any rent:

In respect of such consideration: if the rent, whether reserved as a yearly rent or otherwise, is at a rate or an average rate:

	If the term does not exceed 35 years or is indefinite.	If the term exceeds 35 years, but does not exceed 100 years.	If the term exceeds 100 years.
	£ s. d.	£ s. d.	£ s. d.
Not exceeding £5 per annum	0 0 6	0 3 0	0 6 0
Exceeding			
£5 and not exceeding £10 per annum	0 1 0	0 6 0	0 12 0
£10 „ „ £15 „	0 1 6	0 9 0	0 18 0
£15 „ „ £20 „	0 2 0	0 12 0	1 4 0
£20 „ „ £25 „	0 2 6	0 15 0	1 10 0
£25 „ „ £50 „	0 5 0	1 10 0	3 0 0
£50 „ „ £75 „	0 7 6	2 5 0	4 10 0
£75 „ „ £100 „	0 10 0	3 0 0	6 0 0
£100. For every full sum of £50, and also for any fractional part of £50 thereof	0 5 0	1 10 0	3 0 0

(4) Of any other kind whatsoever not hereinbefore described, ... 10s.


YELLOW
GREEN
BLUE
YELLOW
ORANGE
RED
ORANGE
CITRINE
GREEN
ORANGE
RUSSET
PURPLE
COLOURS IN CONTRAST.
SOME COLOU
YELLOW: PURPLE
PURPLE: CITRINE
RED: GREEN
GREEN: RUSSET
ORANGE: OLIVE
COLOUR COMBINATIONS, CONTRASTS, AND HARMONI

DECORATION OF THE HOUSE.

CHOICE OF A COLOUR SCHEME.

Various points should be borne in mind in the selection of a colour scheme. The size of a room, its aspect, and the uses to which it is to be put, are important considerations. Thus a small-sized room appears smaller still when the walls are painted a very low-toned or dark colour, or papered with a design of large, pronounced pattern, just in the same way as a person in dark or black will look thinner than when in lighter clothing.

Gradation of Colours.—It may be found useful if, before particular schemes are discussed, something is said concerning the general relations and properties of colours. From the three primary colours, yellow, red, and blue, all others are obtained. By the simple mixture of any two of them the secondary colours are produced—green from yellow and blue, orange from yellow and red, purple from blue and red. These again supply another series—the tertiaries: citrine being the result of mixing orange and green; russet, of orange and purple; olive, of purple and green. From citrine, russet, and olive an endless variety of beautiful tints is obtained, varying as any particular colour predominates, and it is from these that the best colour schemes are usually selected. Some of the loveliest colours are so subtle in tint, that it is difficult to name them or say what is the prevailing hue.

Properties of Colours.—Colours have definite properties and convey to the mind certain impressions. For example, the warm colours yellow and red produce a lively, cheerful feeling, while the colder colours, blue, purple, and some greens, have the opposite effect. Again, yellows seem to be nearer the eye than they actually are, blues to be farther away, reds to be stationary. Yellow appears lighter, blue darker, red brighter by gas-light than by day.

When a colour has been looked at for a time, it seems to change, some other taking its place. This other is the colour, or combination of colours, necessary to make up the primary set of three. Thus orange after a time gradually passes into a bluish hue, blue being its complementary colour. Again, red looked at for a time seems to be obscured by a greenish hue; and so on.

Harmony of Colours.—As a rule, to obtain the fullest pleasure, the eye demands the presence of all the primaries, and this is possibly why the tertiaries are the most pleasing colours. That all three primaries should

be present for the best effect is, however, by no means a hard-and-fast rule; in some cases the charm of the colourings lies in the absence of one of them. In colour-work the production of proper harmony depends largely on individual artistic feeling or instinct. No cast-iron law can be laid down.

It should be remembered that a colour merely contrasted with its complementary—for instance, red with green—will not necessarily harmonise with it. For harmony there should be judicious blending of the contrasting colour; the red should contain some green and the green some red in its composition, the exact proportions being a matter of practical experiment. As the yellows, reds, and blue-grays of the citrines, russets, and olives contain blendings of all the colours, they give harmonious results more readily than the others.

Suppose it is desired to match a russet colour, which is a gray with a reddish tendency, for it receives red from both the orange and the purple of which it is composed; the colour to go with red is green, but the green employed must partake of the redness of the russet, and if the latter is very low-toned, so must be the former. Again, the proper green to harmonise with a red having an orange tendency—that is, one with yellow in it—is a bluish-green, blue being the remaining primary. In the case of a red having a purple tendency—that is, one with blue in it—the proper green to harmonise is a yellowish-green, yellow being the remaining primary; and so on with all other colours. The last two examples will be found useful in the selection of harmonious colours.

Sometimes a pure colour without admixture is advisable and even necessary to true harmony to give bright colour in a decorative scheme, but generally the primaries are to be avoided.

Drawing-room Colour Scheme.—By far the most important room from a decorative point of view is the drawing-room. Assuming it to be of fair size, and dealing with the walls chiefly, as the largest area to be considered, it is necessary to determine, firstly, whether they are to be painted or papered, or both combined; secondly, whether they are to be decorated in one prevailing colour of different tones, or in various colours in harmony; and thirdly, what particular colour or colours are to be adopted.

The first two points are entirely matter of opinion; to some the one-colour scheme would be monotonous. As regards the third point, the yellower grays or greens are suitable, especially yellow if the room is not well lighted. In the example given (Plate III.), a soft pinkish-gray has been selected for the body of the wall (A). This may be in either distemper or oil. The skirting (B) is in three shades of yellow. The dado portion of the wall (C) is a darker tint of the pinkish-gray, and the wooden moulding (O) is of the lightest yellow of the skirting, and is useful as a shelf for china and other ornaments. The moulding (E), serving as the base of the frieze, and also for picture-hooks, is of the same colour as the wooden moulding (O). Elaborate dados, at one time much in use, are almost entirely out of fashion, more prominence being now given to the frieze portion. The


H
G
F
E
A
D
C
B
Groove for picture hooks
DRAWING-ROOM
DINING-ROOM
LIBRARY

frieze (F) is papered or painted greenish-gray in tones to suit the body. There are beautifully embossed and other papers made specially for friezes, such as lincrusta and anaglypta (see "Wall Coverings"). Usually they can be coloured to suit any scheme. Gesso-work is very suitable for the treatment of friezes, and is uncommon and artistic if really good. The ornament and colour should be of a simple, light, conventional character. The depth of the frieze should depend on the height of the wall. It should never be less than 15 inches. The higher the wall the deeper the frieze. It often looks well when made lighter in tone than the body of the wall. The cornice (G), of which a part (O) is on the ceiling, repeats most of the colours already used. It should be observed that, in the ceiling proper (H), a creamy-yellow is used, not white. White, though clean-looking, is not satisfactory from an artistic point of view.

All the wood-work, such as doors, windows, and shutters, should be in the tones of yellow and pink used in the skirting and in the body of the wall. The small moulding (X) is useful in preventing damage to the skirting. The carpet should be either a low-toned red or green; and the floor-space between carpet and skirting might be painted a darker tone of the dado (C), if the carpet is to be green, but greenish-gray as in the frieze, if the carpet is red. All other furnishings of the room should repeat the colourings used in the wall. Should the room be low in ceiling, the moulding (D) might be dispensed with, the wall (A) being the same colour throughout. If the room is very high, a simply-panelled ceiling of some suitable paper is advisable. All horizontal lines suggest width, and a reference to the dining-room scheme will show that the upright lines of panelling suggest height.

As an alternative scheme, a quiet yellow paper might be used without a dado, the frieze being deeper and distempered in one tone of delicate salmon-coloured red, the skirting being a darker red, and the carpet of bluish or amber colour. Or, again, every part might be in varied tones of red or yellow, but in order to avoid monotony, there should also be delicate contrast in the tones.

To judge the effect of wall-papers they should always be seen in the piece.

Dining-room Colour Scheme.—A warm scheme of colour is chosen for the dining-room. Wooden panelling is used for the dado, or this may be dispensed with. Instead of painted walls, a low-toned red paper may be used, and instead of a dado, a projecting moulding (as at X) is advisable to keep the furniture clear of the wall. Parquetry is suitable for the borders round the carpet, or the flooring may be stained. For the carpet itself, a low-toned olive-green is suitable.

Library Colour Scheme.—In the library the walls are painted in oil or distemper, and kept rather low-toned in order to suggest the repose necessary for quiet study. A little brightness, however, is introduced in the wooden moulding (X) at the base of the frieze and in the cornice. Instead of distempering, a Japanese or other paper may be used, though, of course, it is more expensive.

Hall and Staircase Colour Scheme.—The walls in the hall and on the staircases should not be dark in colour, especially if the entrance is narrow. Terra-cotta, slightly darker than the dado (c) in the drawing-room scheme, looks well in either distemper or paper; or, the ground colour of the frieze in the dining-room scheme may be adopted. Simple wooden panelling carried up a few feet, and stained or painted to suit the colour of the wall, can be recommended. The ceiling should be creamy-white.

General Advice on Colouring.—Light papers do not show dust so much as the darker kinds. In selecting papers, it is well to remember that they are to serve as backgrounds, and should not in themselves attract much attention.

Good plain masses are absolutely essential from an artistic standpoint. The larger the surface of one colour, the lower it should be in tone. Excessive "prettiness" in the drawing-room should be avoided. In all good schemes there is a unity of effect giving a simple spirit of dignity to the whole.

If artistic effect alone has to be considered, all colours should be flat and without shine; but they cost more and do not wear so well as when varnished. As a rule, the darker colours and more rigid forms should be at the base of the wall, the ornament and colour becoming freer and lighter as they ascend. Finally, avoid crowding the walls with pictures. From many drawing-rooms they have been banished altogether, their places being taken by china, which also should not be in excess.

AN ALTERNATIVE COLOUR SCHEME.

For those fortunate individuals who can afford a larger house than the one described in the first colour scheme another is added, in which there is nothing extravagant—nothing that could not be easily managed by people with artistic tastes and some means. Many houses with fairly large and lofty rooms can be obtained for £60 or £70 a year. Sometimes they are modern, but more often they are old-fashioned and need brightening by well-planned decoration; almost always they are far from the large cities and not very near a station. It is especially for such houses that this scheme of colour is planned, though, of course, in many respects it would be useful for smaller ones.

Drawing-room Colour Scheme.—The drawing-room should, if possible, have either a south or a south-east aspect, as there is not too much sun in this country, and the principal living-rooms of the family should be light and cheerful. The walls should be painted a creamy-white, and if they are panelled, the grooving of the panels should be picked out with gold in perpendicular lines. The chimney-piece and the rest of the wood-work should be painted the same colour.

If there are any beautiful full-length portraits, nothing would look better in the panels. They must be taken out of their frames, and if they are to be really effective, the room ought not to be smaller than 26 feet long

by 19 feet wide. Three full-length portraits might be placed on the long wall of the room, as the paintings are usually 7 feet 10 inches long by 4 feet 9 inches wide. There should be 3 feet of panelling at each side of the pictures nearest the corners of the wall, and 3 feet between each picture, making 26 feet in all, the supposed length of the room. If it were slightly smaller, the width of the panelling between the pictures might be reduced. On the short wall there would be space for two portraits 4 feet 9 inches wide, which would allow of about 3 feet for each of the divisions. The full-length portraits should not be placed lower than 3 feet from the ground, and should have 2 feet of panelling above. If the walls were 15 feet high, there would remain 2 feet 6 inches for a frieze, which would look well in stucco, and might be moulded in various ways. Should, however, the ceilings be low, as they might be in an old-fashioned house, the frieze could be omitted.

The ceiling might be in large squares deeply cut to represent carved wood. Opposite the longest wall of the room are usually two or three windows; between each pair of windows, and in the centre of the panelling, two sconces of Norwegian or French design could be placed. Being of brass, they would harmonise with the gilding of the panels. One on each side of the middle portrait on the opposite wall would also be an improvement.

The wall farthest away from the door should be considered next. This is where the fireplace would probably be placed. The chimney-piece ought to be painted like the walls, an ivory-white picked out with gold. It should be of wood, high and with a narrow shelf. Above the shelf, instead of an ordinary overmantel there should be a broad wooden frame painted white, and reaching to within a foot and a half or two feet of the ceiling, for some really good picture, either modern or ancient. On the broad white wood framework surrounding the picture a design in high relief should be fastened. This could be done with stucco (plaster of Paris and glue), which, of course, would be much cheaper than carving the device in wood. However, where there is a carver in the family, he can easily execute a design of pomegranates, or of apples or pears. If flowers were chosen, large arum lilies would look well; or a Scotch family might prefer a border of thistles, with the crest or coat-of-arms at the top of the frame. The design, when finished, ought to be gilded; or, the fruit and flowers alone might be gilded, the leaves being painted white with gold veining. On the panelled walls at each side of the fireplace French girandoles might be placed. These could be picked up second-hand. Below them, on a level with the eye, a row of miniatures, hung by broad cream-satin ribbon, would look well.

The white and gold should be repeated in the furniture, which should be in the French style, Louis XV. or Louis XVI., some of it of satin-wood, some of white wood picked out with gold, and some of the chairs all gilt, with faded blue or pink tapestry for the upholstery. The curtains might be either pale-gold or pale-blue, and the carpet in very delicate tones—a white ground with a mossy border and wreaths of flowers in the centre—in a Watteau design. The wood-work of the floor should be parqueterie of a

light tint, not stained, but done with linseed-oil. The handles of the doors should be of brass, an oval shape being more pleasing than round. With yellow or pale-blue tiles at the side of the grate, white tiles on the hearth, a high brass fender of old-fashioned design, and brass dogs, the fireplace would be in harmony with the rest of the room.

The furniture has been treated in another place; it is mentioned only in so far as it relates to the colour scheme. In general it should be cream, gold, and pale-blue.

In case there are no full-length portraits of beautiful ladies by old masters, tapestry may be substituted for them. It must be of light design; greenish-gray and faint tones look well, and designs after Watteau would be suitable with French furniture. Those who are artistic would not take long to paint it themselves on specially-prepared linen. Shepherdesses, Arcadian glades, men cutting fruits, woods and streams, look well in a drawing-room. For the furniture and curtains, yellow or pale dull pinks would brighten the green walls. The carpet should be light in tone.

Dining-room Colour Scheme.—The dining-room in an old-fashioned house is often panelled with oak. Here, in the panels, portraits of distinguished ancestors are in their right place. Over the oak mantel-piece and let into the oak panelling a good Dutch landscape looks well. If preferred, landscapes can be placed on the walls in frames instead of being let into the walls, as recommended for portraits, but all the frames should be alike. They ought to be of carved oak, wide, flat, and gilt. Any old carving that might be lying unused in the lumber-room could be turned to advantage for many purposes, notably for the mantel-piece and for the framework for the picture above it. For such a room chairs upholstered in red or green leather, a Turkey carpet in warm tones of red and green, and red silk embroidered Indian curtains, would be most appropriate.

The Hall Colour Scheme.—For an old-fashioned house in dark panelled oak a polished floor with light deer-skins would relieve the darkness of the oak. Armour, heads of game, antlers, curiosities in the way of old guns, weapons, shields, spears, all are useful to break the mass of dark wall. The couches should be covered with warm, red material, or if the upholstery is imitation tapestry, there ought to be plenty of bright large cushions, which might be made of Turkey twill. Stands of plants with brilliant flowers—azaleas, geraniums, tiger lilies, or chrysanthemums—would give the necessary colour. If the hall is not panelled originally, it should be done with wood-work half-way, or a quarter-way, up the walls, and the panelling should continue up the staircase. Deal, which is not expensive, could be used for the purpose. If the hall is painted white, a paper with large red design on white ground would look well above the wood-work. If green is chosen, pink-and-white paper of renaissance design, or if brown, yellow, or pale-pink, self-coloured paper or paint would be most suitable. On the walls above the wood-work old weapons or sportsmen's trophies might be placed. The staircase should continue the colouring of the hall. If the floor is of polished oak, a carpet is not necessary, mats being quite

sufficient, but when the surface is slippery some prefer to have a Persian or Axminster carpet, or a cheaper Roman one of brown or green.

Library Colour Scheme.—The library should be bright and cosy, with light oak bookcases round the walls. Low ones look the best, with statuettes and plants on the top; but if the master of the house is a studious man, he will want more accommodation, and shelves for books should line the room. There should be a warm Turkey carpet, and a comfortable well-cushioned Chesterfield sofa covered with Indian embroideries, curtains of red silk, and a screen in light oak with plate-glass.

Bedroom Colour Scheme.—The following three schemes are all suitable for bedrooms:—

1. Large design of purple irises for the paper, ivory-white paint for the wood-work, picked out with gold; pale golden-brown carpet, and curtains striped gold and white. Colouring: gold, purple, white.

2. Best room. For the paper, a large design of two shades of yellow poppies, dark and light, on white ground. Ivory paint; gray-green carpet; green and white chintz curtains. Colouring: yellow, green, white.

3. Walls panelled, oak furniture, yellow silk brocade curtains for bed and windows, brown and yellow carpet. Colouring: brown and yellow.

Nursery Colour Schemes.—The day nursery should have brightness, warmth of tones, and light. Too much red is to be avoided, as it is trying to the eyes. There are many very pretty light nursery papers illustrating nursery rhymes. These, if chosen in light tones, could then be varnished over, which would keep the paper clean, and it could be carefully wiped with a damp cloth when dirty. Instead of nursery rhymes some coloured prints in the illustrated papers are excellent. If they are carefully pasted on the wall, with panels of a buff or straw-coloured paper 3 feet wide between the pictures, and then varnished all over, they give the nursery a cheerful appearance. The wood-work might be dark olive-green or pitch pine, which would be clean and fresh looking. A warm carpet in the centre of the room, in reddish tones, the boards all round being polished, would give a general fresh appearance.

On the walls of the night nursery there should be a paper of a white ground, with sprays of pink rosebuds trailing all over it, and green leaves. The curtains to the windows should either be white dimity or chintz, the design rosebuds on white ground. Ivory-white paint, and a floor of polished wood, with large warm rugs in tones of pink and green at each side of the cots, and a very large hearth-rug in tones of pink and green in front, will combine well with the rest. The valances to the cots should be of the dimity or chintz. On each little bed should be laid an eider-down quilt of pink silk in centre, with border of apple-green. The furniture should be ivory-white.

PROFESSIONAL AND AMATEUR DECORATING COMPARED.

To lay out money on another person's property without hope of adequate return is a form of expenditure which is obviously unsatisfactory and unprofitable. Yet as only a small proportion of the population own the houses they live in, it is one that can rarely be entirely avoided. Landlords are not unnaturally disinclined to incur unnecessary expense on decorative repair, and the tenant with strongly marked artistic tastes will find that every change of dwelling means a more or less extensive outlay in this respect.

There are several ways of arranging the matter of decoration allowances. One is to agree to pay a slightly increased rent on condition that the landlord carries out the tenant's decorative requirements. This, however, is rarely satisfactory, often resulting in much bickering over details.

According to a second plan the landlord does just what he considers necessary—generally very little, as is natural enough from his point of view—the tenant defraying the cost of such extras as dados of lincrusta or similar material, frieze-rails, paper of special quality in particular rooms, and good tiles instead of cheap ones in the hearths. A third method is for the owner of the house to allow the tenant a fixed sum, and permit him to do the decorating as he pleases. In this case certain stipulations are usually made as to the price of papers and the number of coats of paint, and the tenant may be requested to prove by means of invoices that he has actually laid out the sum agreed upon.

Not one of these arrangements will be found to work smoothly, however, unless the landlord is not only able to lay out a reasonable amount on the improvement of his own property, but also sufficiently sensible to realise the false economy of sacrificing quality to cheapness. For to have common papers that fade in a month and tear at a touch, and to attempt to conceal dirty, rough, old paint with a single coat of cheap new paint, mixed with inferior oil and a scanty quantity of turpentine, pays very badly in the end.

When the occupier of the house has an absolutely free hand in the decoration, the matter is on an entirely different footing. He has three courses open to him. He may—

(1) Employ the best firm his means permit to do the work by contract;

(2) Provide his own materials, and engage a jobbing decorator for the actual labour; or,

(3) Carry out the work himself.

If it is feasible to employ a really high-class firm that has a reputation to sustain, the result will, in most cases, be perfectly satisfactory, although the first cost may appear alarmingly heavy. But if by reason of distance from a large town, or the necessity of economising in the immediate outlay, such a firm cannot be employed, the work must be entrusted to the local man. In this case a good deal of supervision is often required, while there is always the chance that the patterns put up are far from new.

When the second method is adopted, the employer can at any rate choose his own papers without let or hindrance; but the probabilities are that more paper and paint will be used than if the work were carried out by the tenant himself, while it will not be greatly superior to that of an intelligent amateur who can use his hands with a fair amount of dexterity

The third plan is, obviously, the cheapest of all. Whether the result is satisfactory, of course, depends entirely on the powers of the amateur decorator; but, as will be seen by the instructions to be found in another section of this volume, the painting and papering of an ordinary room in an ordinary way is not a very formidable undertaking. It is certainly one worth attempting in cases where expense has to be considered, as is made evident by the example of comparative costs which follows. The room taken as an illustration is an ordinary bedroom in a suburban villa; its dimensions are 14 feet by 13 feet, by 8 feet 6 inches high, and it has the usual rectangular sash-window, one door, and a hanging cupboard in a fire-place recess. Here is the cost of work when performed by a firm of builders and decorators:

	£	s.	d.
PAPERING—			
8 pieces at 2*s.* 6*d.* per piece	1	0	0
Charge for hanging at 1*s.* per piece	0	8	0
PAINTING WOODWORK—			
Repairing surface, stopping, and two coats of paint, 20 square yards at 1*s.* 6*d.* per yard	1	10	0
DISTEMPERING—			
Ceiling, 20 square yards at 3*d.*	0	5	0
Cornice, 48 feet at 1½*d.* per foot run	0	6	0
Total	3	9	0

And here is the cost of work when performed by the tenant:

	£	s.	d.
PAPERING—			
7 pieces at 2*s.* 6*d.* per piece	0	17	6
Paste	0	0	6
PAINTING—			
7 lbs. at 4*d.*	0	2	4
1 lb. putty at 2*d.*	0	0	2
DISTEMPERING—			
7 lbs. calcarium	0	1	6
TOOLS—			
One-tenth of cost (12*s.* 8*d.*)	0	1	3
Total	1	3	3

TOOLS—	£	s.	d.
1 large paint-brush	0	3	3
1 dusting-brush	0	2	6
1 sash-tool	0	0	3
1 whitewashing (and pasting) brush	0	4	2
1 paper-hangers' scissors	0	2	6
Total	0	12	8

The difference in the number of pieces of paper put down in the two estimates is due to the fact that the workmen will be less careful of the paper than the tenant, and will probably use, even in a small room, at least one piece more than is necessary. The allowance for wear and tear of tools is based on the supposition that, with an average amount of care, the brushes can be used for the painting of at least ten rooms of similar size. Calcarium is allowed for instead of ordinary wash, as prepared distemper is somewhat easier and less disagreeable for an amateur to apply; if simple whitewash tinted to taste is used, the cost will be reduced by about a third.

It is often possible to save more than the actual cost of the paper-hanging if the tenant does his own work, for at many of the best shops in London and other large towns "last season's" designs—they are none the worse for that—and remnant pieces are sold off very cheaply once or twice a year, at which time it is possible to obtain really good quality papers for a quarter their original price, the reduction sometimes being as much as 80 per cent, and even more.

If time is no consideration, it will be found that in every other branch of house decoration, the saving effected by dispensing with the professional is as marked as in the paper-hanging and painting. Take the laying of linoleum, for instance. An ordinary furnishing warehouse will charge the "man's time" at the rate of 9*d.* or 10*d.* per hour, and the man will cut up an immense quantity of linoleum because "the hall is such an awkward one to fit", or "the pattern wants such a lot of matching", and probably leave not a few untidy places round door lintels and sharp corners into the bargain. Whereas it may be put down by an amateur at the cost of a few tacks, and, it must be admitted, a good deal of time and patience, for to fit linoleum round a room or along a winding corridor requires considerable care if the work is to be done neatly and without waste.

Take the staining of floor boards again. The estimate given by a firm of decorators for staining a 2-foot wide margin round the floor of a room 14 feet by 12 feet was 12*s.* 6*d.*, this price covering stopping, sizing, one coat of stain, and two of varnish. With only one coat of varnish, the cost would have been 8*s.* 4*d.* These prices work out at about 1*s.* 3*d.* and 10*d.* respectively per square yard. Now an amateur could carry out the work in the same way, that is to say, by applying the coats of size, stain, and varnish separately, with a saving of something like one-third of the estimate, while if he used one of the ready-mixed varnish-stains the first outlay would be still less. Whether the simpler method is really cheaper in the long run is a point on which there is some difference of opinion, but the London price for varnish-stain is only 3*s.* 10*d.* per half-gallon, which should be sufficient for the amount of floor space specified. A few pence would, of course, have to be allowed for wear and tear of brushes in addition to the actual cost of the stain.

If one of the various home-made stains, such as a solution of permanganate of potash or an infusion of logwood chips, were used, the cost would

be still further reduced, especially if in place of varnishing—desirable but not actually essential—the stain were merely polished with bees'-wax and turpentine when thoroughly dry.

Taking the figures given as a basis, it will not be difficult to work out the comparative cost of professional and amateur decorating on a larger scale. It should be remembered that the difference between the two methods becomes more marked when the decoration of the superior rooms comes in question, for the professional price for hanging wall-papers advances in proportion to the increased cost per piece, and "special" rates are invariably charged for putting up so-called fancy papers of the class to which lincrusta, cordelova, anaglypta, and Japanese leather-paper belong. These undoubtedly need to be handled with a certain amount of dexterity, yet their successful manipulation is not beyond the powers of an amateur.

The replacing of old-fashioned grates—those cast-iron caverns that consume a maximum quantity of coal and give out a minimum of heat—is an improvement which often falls to the lot of the tenant to carry out. Unfortunately the setting of grates and the laying of tiled hearths are less within the capabilities of amateur craftsmen than the lighter branches of decoration. Yet if the householder knows something of the proper prices for tiling and fixing respectively, he will be able to check the figures in the "estimate". Glazed tiles, for instance, suitable for hearths, cost from 12*s.* per square yard; the proper charge for preparing the cement bed is about 1*s.* 9*d.* per square yard; and the price for setting the tiles ranges from 2*s.* upwards to 8*s.* or 9*s.*, according to the pattern selected. An ordinary hearth, such as is found in the drawing-room or dining-room of a small suburban villa, takes, roughly, about half a square yard of tiling.

PAINTING.

Every householder ought to know how to apply paint, for he will thus save much money, and will be able to accomplish a large amount of decoration which, even if not absolutely necessary, yet greatly improves appearances. No especial skill is required, only care and pains. The various stages in the process, and the precautions to be observed at each, are as follows:—

Preparing the Wood.—All wood-work which is to be painted must be carefully finished off with the carpentering tools, for no amount of paint will make a bad surface look well. All roughness must be smoothed down with glass-paper, and the wood, if movable, slightly tapped with a mallet to remove saw-dust. Holes and cracks are then filled with white-lead stopping applied with a putty-knife or the back of a chisel. The putty must be well pressed into the holes and carefully smoothed down. The work is then brushed over with a flat brush of the shape shown in fig. 8, and is ready for the paint.

Cleaning Old Work.—In re-painting most indoor work, such as panels, cupboards, doorways, and doors, it is not always necessary to get rid of the old paint. Skirting-boards are usually much knocked about, therefore the old paint will generally require to be removed from them. It should certainly be removed where it has been blistered or otherwise roughened. If it is left on windows and tightly-fitting doors, sticking will be the result. When the old paint is allowed to remain it should be well washed, and as soon as it is dry will be ready for the new coat.



Fig. 8.—Cleaning Brush.

Removing Old Paint.—A paint-remover is shown in fig. 9. It is a square metal box open at the top, with a row of bars in front and a handle at the back. It should be filled with red-hot charcoal and held against the paint, which becomes quite soft, and may then be scraped off with a putty-knife, chisel, or other suitable tool, or with a special tool shaped something like a garden hoe. Care must be taken not to burn the wood or cut it with the tool. All the paint should be scraped away until nothing but the clean surface of the wood is left. There is a gas paint-remover, which is simply a gas jet supplied with gas from the main by an india-rubber tube. The flame is allowed to play upon the wood until the paint is soft enough to be scraped off. There is also a spirit-lamp paint-remover, which works in a similar manner. When the paint has been carefully removed, the surface is scrubbed with pumice, if necessary, and well washed. All holes and cracks are then filled with white-lead stopping, and the whole is treated with coarse glass-paper. The old paint can also be removed with a solution of caustic potash, but this is troublesome to apply and clean off. Old metal-work is cleaned in the same manner, though the paint can sometimes be removed with a scraper without the use of heat.

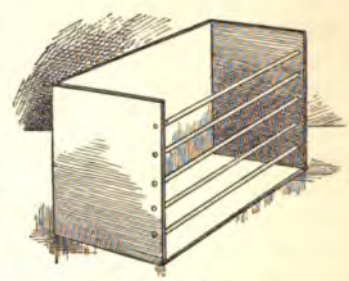


Fig. 9.—Paint Remover.

Applying Paint.—It is better to use ready-mixed paint, as less appliances are required, and there is very little difference in the cost. The best kind of brush to use for large surfaces is shown in fig. 10, and one suitable for doing fine work in fig. 11. As the bristles of new brushes are rather longer than is necessary, it is best to tie them up tightly with string at the upper end. A useful paint-pot, as shown in fig. 12, can be made out of an old meat-tin. Two or three are required. They can be hung by hooks from the ladder. The paint is well stirred, and transferred from the tin to one of these pots just before use. The wood being quite dry, the paint is laid on thinly and well rubbed in, so that no brush marks are visible, care being taken to cover every part well. Only the tip of the brush

should be dipped into the paint, otherwise too much is laid on and splashing is inevitable. The paint must be well stirred every now and then with a stick, especially if it is white paint. It is best to begin at the top and work downwards, also to finish off each piece before commencing another. As soon as the first coat is quite dry, a second can be applied. When the old paint is in sufficiently good condition not to require removal, one coat is sometimes enough; but if the work looks thin, a second must be added. New work always requires two coats. A final coat of varnish may or may not be added according to taste.

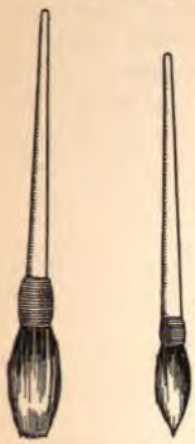


Fig. 10. Fig. 11.
Paint Brushes.

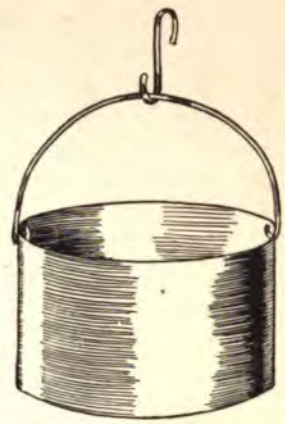


Fig. 12.—Paint-pot and Hanger.

Doors and skirting-boards are sometimes picked out in two or more shades or colours. Thus the framework, moulding, and panels of a door can be done in different shades, the darkest usually being outside. In doing such work the parts where the two colours meet are painted with the fine brush (fig. 11), the bristles of which should be tied up near the handle so that the paint may not get over the boundary.



Fig. 13.—Section of Brush-cleaner.

Good work cannot be done without good brushes. To keep them in proper condition the paint should be well cleaned out of them when they are put away. They are first drawn over the edge of the paint-pot to remove any superfluous paint, then wiped in a rag, and finally washed in turpentine until they are quite clean. Fig. 13 shows a section of a useful brush-cleaner. It consists of an outer vessel containing turpentine into which fits an inner vessel with a perforated bottom. The brushes are rubbed against the perforations, which causes the paint to pass through to the outer vessel. They may be left thus for the night.

Enamel Paint and Porceleine.—These are paints which have a smooth, glossy appearance when dry, and are equally suitable for metal or wood. They are generally used for renovating bedroom furniture, water-cans, and jugs, and for ornamenting light wood articles for the drawing-room or boudoir. The paint must be laid on thinly, otherwise it runs and leaves ridges. A special enamel is sold for baths.

WHITEWASHING AND DISTEMPERING.

Ingredients.—The ingredients required for the proper making of whitewash and distemper are size and whiting (carbonate of lime). The latter costs 3*s.* per cwt. To obtain a good result it is important that the whiting should be of the best quality. It crumbles readily when good and fresh. Size can be obtained in two forms—as a powder, which is the more convenient for the home worker, and as a jelly, which dissolves more easily, but decomposes if kept too long. As a powder it costs 9*d.* per lb., and as a jelly 1½*d.* per lb.

The colouring matters which must usually be added to the two essential ingredients vary in price, brown and yellow costing 2½*d.* per lb., and blue, green, and red from about 5*d.* per lb.

Lime is sold at 3*s.* per bushel. Plaster of Paris, which must be fresh, costs about 6*d.* per gallon. It is sometimes sold in packets securely tied at the ends, and in that form is more likely to be fresh than when it is sold loose. If it crumbles when it "sets" it is stale, and therefore useless. All these ingredients may be obtained at a good oil-shop, or from a builders' merchant.

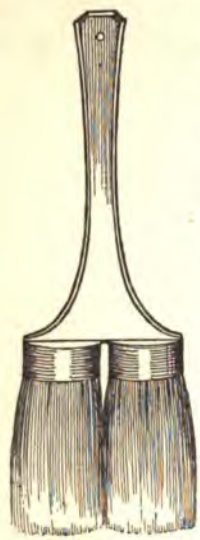


Fig. 14.—Large Flat Brush (for whitewashing).

Implements.—Brushes cost from 2*s.* 6*d.* to 12*s.* according to their size and quality. A good brush for a woman's use costs about 6*s.* (fig. 14). The weight must always be a consideration. A brush, before being purchased, should be tested by balancing in the hand in the same manner as a tennis-racquet. If it feels heavy when dry, it should on no account be chosen. There is no saving of time in using a very heavy brush, for a lighter one will cover the same ground more rapidly. Another essential is a step-ladder; indeed, there should be a pair, with a strong plank to rest upon them, if there are to be more operators than one.

Then, of course, several buckets are required for the ingredients; and if the work is to be done by a woman, she should have a large light can to hold the distemper, and a ladle for the purpose of filling it from the bucket.

Preparations.—With care it is quite possible to distemper walls or ceilings without any serious disturbance of the furniture. If the materials are properly prepared and properly used, there should be very little, if any, splashing. But to guard against accidents, it is better to remove all ornaments and lighter objects, and to protect the carpet and furniture with sheets or old newspapers. Workmen are apt to be careless, and when they are employed the carpet, at any rate, should be rolled up and taken away.

Whitewash.—To make whitewash, whiting should be broken up into a clean bucket containing just sufficient cold water to cover it. It should be

left all night. In the morning, the water which floats at the top should be carefully poured off, and the contents of the bucket should be thoroughly mixed together with a wooden spoon or stick.

The size must be dissolved separately. It should be placed in another pail, at first hot water and afterwards warm water being poured on it in the proportion of about 2 gallons of water to every pound of size. It must be thoroughly stirred till it is free from lumps. In order to avoid the cold effect of perfectly pure white, a little blue is usually added.

Distemper.—For distemper, first make some unsized whitewash in the manner just described; then mix powdered colour with a little water and add it gradually to the whitewash. The operator should stir the whole well, frequently testing the tint by putting a small quantity on a board or a sheet of paper and drying the sample either in the sun or at the fire. When the required tint is obtained, warm size prepared in another bucket—in quantity half that of the whitewash—should be added, the whole being stirred together, always in the same direction, until it is thoroughly mixed.

A little cold water should afterwards be poured on the top to prevent the formation of a skin when the distemper is cool, for this skin is both wasteful and inconvenient. When the mixture is perfectly cold and jellied it is ready for use. The success of both whitewash and distemper depends upon their being well jellied. The sole difference between the two is, that the latter is coloured and the former is not.

To Remove the Old Whitewash.—The first proceeding after the new distemper is made is to wash off every vestige of the original coat from the walls. For this purpose a wide brush, a small bucket of clean water, and an absorbent cloth which is not fluffy, will be required. The walls must be first well washed over with the brush charged with water, and afterwards dabbed with the cloth, the water being changed as soon as it becomes much discoloured. When the distemper is very obstinate a second washing may be necessary.

Some amateurs think that a ceiling or a wall cleaned with bread-crumbs or dough is in a proper condition to work upon. This is altogether wrong; it is impossible to attain a satisfactory result unless the old distemper is first removed.

When the wall or ceiling has never been treated before, it should first be given a coat of thin melted size, which should be allowed to dry thoroughly before the distemper is applied.

To Stop Cracks.—The next proceeding is to fill the cracks and make good any defects. This should be done the day before the distemper is applied, and immediately after the old distemper is cleaned off. The cracks should first be well damped with a fine brush dipped in water, and then a mixture of plaster of Paris, with a third as much whiting and either water or thin size, must be used for filling.

As plaster of Paris alone sets so quickly, there is a difficulty in stopping the cracks with it, the operator having continually to mix a fresh supply. By the addition of whiting the setting is delayed. The plaster when mixed

should be put in a mass on a small hock-board, which is a disc of wood with a handle fitted underneath it.

When filling cracks only, the plaster should be applied with a stopping-knife, a thin knife somewhat like a palette-knife. Defects in the walls must be filled in after damping well, and the plaster must be applied with a small trowel.

An Uneven Ceiling.—Any unevenness of the ceiling caused by the filling of the cracks can be removed with the stopping-knife, which must be dipped into cold water each time it is used for this purpose. A small tin can of water should therefore be at hand. The knife should be held in a slanting position, only the edge of the blade being used. It should be worked in this position to and fro along the cracks, or, in the case of a defect or hole, round and round it.

The room is now ready for the application of distemper or whitewash.

Two Operators or One.—When two operators work together, the process is simplified. Two sets of steps can then be used, with a scaffold board between them. The operators, one standing at each end and working towards the opposite end, can join their respective strips before the edges have had time to dry. In this way the time is lessened by one-half, and the result is more satisfactory. When it is impossible to procure two step-ladders, a kitchen table can be utilised for the purpose, or two packing-cases with a board placed between them.

If the operator is single-handed, the task is rather more tedious; but with a light and steady step-ladder, a short skirt, an overall, and a cap to protect the hair, it may be performed with perfect success by a woman unaided. It is a wise precaution to wear a leather wristlet buckled tightly round the right wrist, which is apt to ache after a time. The distemper, when gelatinous, certainly weighs more than it does when in a more liquid state; but, as already stated, it is much to be preferred in that form, because of its smoothness in working and its freedom from splashing.

Method of Application.—Both distemper and whitewash must be applied evenly. The brush—the wider it is the better, so long as it can be easily handled—should be plunged half-way up the bristles into the liquid; it should then be lightly tapped on the edge of the bucket, and immediately applied to the surface. It is important to work only in one direction—away from the operator. In this particular the application of distemper differs from that of paint. Quickness in working is essential to success. Before one stroke of the brush has time to dry, the next must meet it. To do this demands some nimbleness in running up and down the steps and in moving them from place to place.

It is better to do the cornice last of all. The distemper should be applied with two small brushes, one round and the other flat. These brushes adapt themselves to the interstices and raised work of the cornices.

Limewash.—The old-fashioned limewash is made by putting slaked lime into a wooden bucket, pouring hot water on it, and thoroughly mixing until it acquires the consistency of cream. It is now rarely used for living rooms.

For outbuildings, stables, sculleries, and larder, it is excellent on account of its antiseptic qualities. For this reason it is most useful in cottages where there has been any infectious illness, or where the walls and floor, through neglect, have become dirty.

The old coat should first be removed, and the freshly-made wash should be applied with an ordinary flat brush. The work is not pleasant for a woman, as splashing is unavoidable, and the lime is apt to burn whatever it falls upon. Gloves should be used by a person with delicate hands.

WALL COVERINGS.

Whitewash.—One of the oldest and simplest methods of covering with a clean and uniform coat any wall surface of stone, brick, or plaster is whitewashing. As it has been described in the previous section, it need not be further mentioned here.

Oil Paint.—Oil-painting is one of the most solid and durable ways of covering and decorating wall-surfaces, but these must be sound, smooth, and in good condition generally, as the paint shows up very clearly all unevennesses and inequalities; and although this defect may be minimized by the use of "flatting" (*i.e.* paint mixed with a large proportion of turpentine), which gives a duller surface, it cannot be obviated altogether. Oil-painting is, therefore, most suitable for surfaces of new well-finished (but of course dry) plaster, for some of the various forms of relief decoration, and over flock-paper that has become soiled, when a new effect of low relief work is produced.

As the surface of oil paint is not absorbent, moisture readily condenses on it in wet weather or with change of temperature, and it therefore needs occasional wiping down and cleaning to prevent dirt from accumulating. If this has already happened, a little soft soap with whiting or fuller's-earth may be used, care being taken to wash it well off with clean cold water and to dry with a soft cloth.

Paper.—The most universal of all wall coverings is, of course, paper, and with it all kinds of effects, suitable for all classes of dwellings from the castle to the cottage, may be obtained at prices varying from a very small fraction of a penny to a good many pounds for each square yard of surface covered. The artistic quality of wall-papers is not, however, always in exact proportion to the price, as some of the expensive papers are very ugly and some of the cheap ones excellent in design.

Plain Papers.—For certain purposes and situations quite plain papers can be obtained in a very great variety of good and pleasing tints. The cheapest form of this kind of paper is that known as "lining", which costs about 1*s.* 3*d.* per piece. Next in cheapness is the plain sanitary (washable) styling paper, at about 2*s.* per piece; very useful in many places, it is unsuitable for damp walls, as it stains easily, and damp marks do not dry

out of it so easily as out of softer, uncalendered papers. Most artistic of all plain papers are, however, the "ingrains", in which the colour is in the paper itself and not on the surface. They are very soft in effect, but are sometimes apt to be fugitive in colour under a strong light, show damp stains readily, and, like all plain surfaces, quickly reveal any damage or imperfection. Their price is about the same as or a little more than that of the printed styling papers just mentioned.

Patterned Papers.—Of patterned papers there is, of course, an endless variety to choose from, but they may be broadly divided into hand- and machine-printed goods, according to the method of their production. The

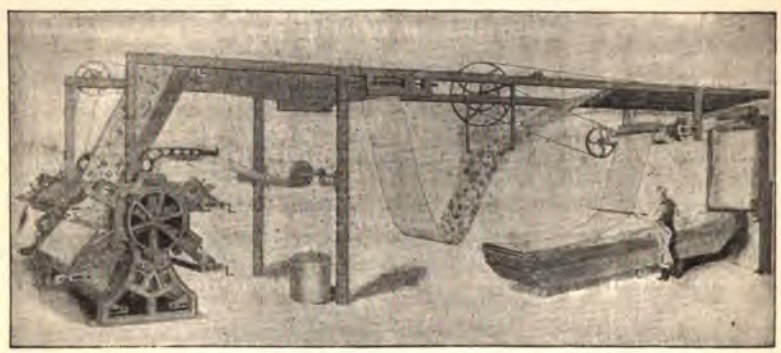


Fig. 15.—Machinery for Wall-paper Printing. (The paper after being printed is carried over a long stretch of supporting framework to allow it to dry before being folded.)

former is the more artistic process, and admits of a more sympathetic rendering of the artist's original design, but being necessarily less rapidly produced, is more expensive. Good block (hand) printed papers cost from about 2*s.* 6*d.* to £5 per piece, according to design and colouring; it is worthy of note that the same design in varying colours will also vary in price. In final appearance the block-printed papers are, however, now very little superior to those produced by machinery, so that it sometimes takes an expert to discern the difference. The latter papers vary in price from 6*d.* to 10*s.* 6*d.* per piece.

Sanitary.—Sanitary papers, whether plain or patterned, are machine-printed papers in varnished colour, which admits of their being cleaned with a sponge and cold water, but not with hot water or soap. They are not usually very satisfactory in pattern, the method of engraving the copper rollers from which they are printed being best suited for the production of shaded designs giving a pseudo-relief, which in some parts of the room must inevitably be contradicted by the actual lighting, and so produce a very incongruous and unpleasing result. The appearance of relief without its actual presence is thus unsuitable for wall decorations, as is also that extreme naturalism of design which gives us bunches or sprays of flowers coloured and shaded as they might appear in a picture, and often apparently hanging in the air without any support. The main and most usual function of a wall-paper is to serve as a background for

pictures and furniture, for which purpose conventional designs are generally best. This also holds usually when in the absence of other decoration the design of the wall-paper may be made more pronounced.

Wash Printing.—A large proportion of both block-printed and machine-printed papers are struck in solid colours, but some designs lend themselves more especially to what is known as "wash printing", in which the semi-transparent colour is mottled or unevenly distributed by the action of the printing surface as it leaves the paper. This produces an effect of artistic "quality" that is very charming, especially when used for printing on the "ingrain" papers; it does away with the extreme regularity and evenness which are generally characteristic of the machine-printed papers.

Various Patterned Papers.—To obtain other varieties of surface and texture than those given merely by the ordinary paper and colour, other devices are also employed, such as the use of mica more or less finely powdered with the colours, by means of which the so-called satin, satinette and similar effects are obtained. A textile or tapestry appearance is also produced by close cross-lining or by very slight embossing of the paper itself with a textile surface; but these papers are seldom satisfactory in design, or good in effect when hung. They vary in price from 1*s.* to 5*s.* per piece. Lustre and gold papers are made by the application of bronze powders to paper on which the pattern has been printed in gold-size, to which the metal adheres. They are useful in some places, but at times are apt to produce an inartistic and patchy effect. The price is from 1*s.* 6*d.* per piece upwards.

A somewhat similarly-made class of paper is that known as "flock", the design of which is first printed in a sticky oil colour and then dusted over with the "flock", which is very finely-powdered wool, or in some cases silk, the latter producing a very rich effect. This operation can be repeated several times until an actual relief decoration is obtained, some varieties being especially made for this purpose. It is often the custom when even an ordinary flock-paper has become dirty or faded to give it a coat or two of paint, which gives to it at once a low-relief decoration with a new lease of life. The objection is sometimes urged against flock-papers that the particles of wool are apt to become detached and form a noxious dust floating in the air, but with the well-made papers of the principal makers this danger is more imaginary than real. If one is suspicious of arsenical colouring in any green wall-paper, an easy test can be supplied by the nearest chemist, but a good many examples, even of the green flock, which was once the worst offender, will probably have to be examined before any arsenic is found. The prices of wool flock-papers vary from 9*s.* to 30*s.* per piece, and of the silk flock from 30*s.* to 80*s.*

What is known as Muraline wall-paper has the advantages of being washable with soap, brush, and water, and of being impervious to damp or steam; it is therefore very useful for bath-rooms and lavatories. It is rather wider than ordinary paper, being 24 inches broad, and is made in the usual 12-yard pieces at prices from 2*s.* 6*d.* per piece.

Stencilled Papers.—Another form of decoration which is also produced both on paper and fabrics is stencil work. Occupying, as it does, a position between the finest hand decoration and the more mechanical wall-paper, this stencilled work is, of course, somewhat expensive, the prices beginning at about 2*s.* a square foot, but its effect is very beautiful. Stencil decoration can, of course, be also applied to both distempered and oil-painted walls, but that executed by the average "painter and decorator" is usually very poor indeed in design and colour. The art would, however, offer a good scope for the abilities of a clever and artistic amateur.



Fig. 16.—Stencilled Fabric. (The "Harrogate" Stencil.)

(By permission of
Messrs. Aldam, Heaton & Co., Ltd.)

Appropriateness of Papers.—Where many pictures are to be hung the pattern of the paper should be unobtrusive and well covered, and for oil-paintings and water-colours in gilt frames and mounts some of the reds and claret colours will be found to be appropriate backgrounds. For black-and-white work and engravings with white margins dull yellows and sage and olive greens are suitable, and for carbon and platinotype photographs dull blues and warm grays. In rooms with but few pictures larger and more definite designs may be used, as also often on staircases, even if these are not particularly large or wide, there being always a considerable height on the "rake" to be filled up.

Of course, if any apartment is to be furnished completely in any one of the historical styles, the paper must also harmonise with it, a result not at all difficult of attainment now that so many thoroughly qualified architects and trained designers have turned their attention to the production of wall-papers. All the various French periods, as Louis XIV., Louis XV., Louis XVI., the First, Second, and Third Empires, have their appropriate papers, and for our Chippendale and Sheraton periods we have papers in the "Adams" style and others.

It may here be laid down definitely and once for all that any imitation of one material in another is decoratively and artistically bad. Every kind of material has its own merits and its own possibilities, and is always most successful when employed in accordance with them; further, materials are

now so many and processes so ingenious that there is no excuse for such imitations.

The Various Rooms.—The uses and occupations of the various apartments should also influence the choice of papers for them. The hall should certainly not be hung with a paper representing great blocks of marble; this would not only offend against the rule concerning imitation of one material in another just laid down, but would further be incongruous in an English urban or suburban dwelling. Patterns of a purely geometrical nature, or of foliage based upon geometrical lines, with fairly strong colourings of the primary tints, are most generally suitable and satisfactory in the hall. For large halls, especially those at all Gothic in architectural features or furnishing, some of the heraldic designs are very appropriate. An effective design, in classical style, which may be obtained in various colourings, is illustrated in fig. 17. For dining-rooms which are furnished with some degree of solidity fairly large patterns and warm soft tints of reds, russets, and golden-yellows are generally safe and satisfactory; for the library or study restful greens and dull, dark blues and grays. The drawing-room it is usual to treat in a lighter style, and for this purpose many excellent papers in pale yellows

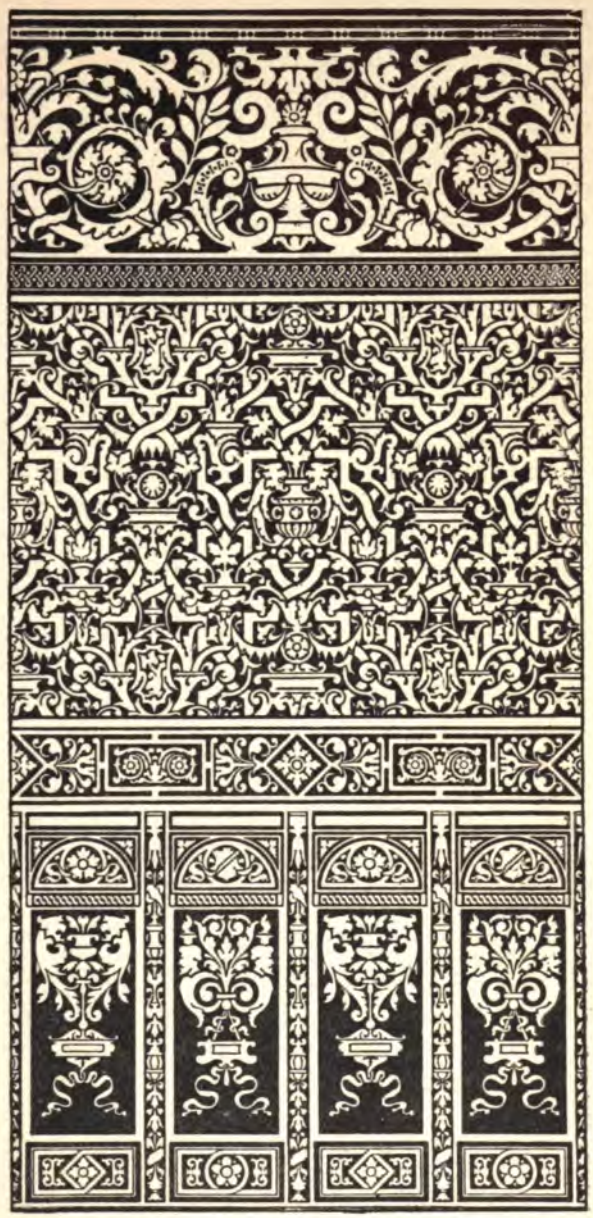


Fig. 17.—The "King's College" Wall Decoration. Designed by Owen W. Davis.

(By permission of Messrs. Wm. Woollams & Co.)

and blues, buffs, and light reds are to be found of all sorts, designs, and prices. Bedrooms should be neither too light nor too dark, and here particular care must be taken not to select patterns that, when seen in quantity, form themselves into lines, spots, or other countable devices. Most of us have probably experienced the horrors of this possibility when lying on a bed of sickness, but by a little forethought it can easily be avoided. Tiles are undoubtedly best for bath-rooms, but if owing to their cost they cannot be obtained, good washable enamel paint may be used or well-varnished paper. If the latter is preferred a pattern should not be chosen simulating wood, or tiles, or mosaic work, but one that is honestly a paper design. Some very appropriate designs, as of water plants and fish, are sometimes to be seen. For the nursery a washable wall-surface is also very desirable on the score of health, and some appropriate nursery-rhyme patterns have been produced by Walter Crane and others, notably that of "The House that Jack Built".

Relief Decorations.—Most of the above remarks on the choice of wall-papers, especially concerning such matters as lighting and colourings and the size of patterns and rooms, apply also to decorations in relief. Some of the principal forms in which these are made, and their application to varying circumstances, will require a brief consideration. Of the raised flock-papers something has already been said, and it is only necessary to add that in decorating them by painting after their first freshness as paper has departed, it is easy to get variety of tint by rolling colour on the raised portions or by giving two coats of varying tints and "wiping" the last from the projections.

For relief-paper decoration already finished in gold and colours nothing is better than the Japanese leather-papers now so extensively imported into this country. Many of them are copied from old Spanish embossed leathers and are very fine in design and colour. They vary in price from £1 to £3 per piece of 12 yards, but in computing the cost it must be remembered that they are 36 inches wide as against the English paper width of 21 inches. Being very hard and durable when fixed, these papers are very suitable for dados, and for halls and staircases generally. Another relief-paper decoration is lignomur, which is very suitable for ceilings; the white (*i.e.* uncoloured) costs from 6*d.* to 1*s.* a yard. Anaglypta, a similar material, is made in a great variety of designs in both high and low relief, at prices varying from 6*d.* to £1 a square yard. Some of the ceiling designs in this material are very fine and architectural, and many special designs for panels of various sizes, and specially-fitted forms for dados, friezes, the "rake" of staircases, are also published. Yet another form of relief decoration is made by the "Tynecastle" process. There are two forms of it, known as Tynecastle Vellum and Tynecastle Canvas, the relief in the former having a paper substance and in the latter a canvas backing. The former is, of course, most suited for low-relief work, and in price begins at about 1*s.* a yard, while with the latter almost any amount of relief can be obtained, more indeed than in almost any other similar material, the prices





JAPANESE LEATHER PAPER DESIGN

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LIGNOMUR—"

By permission of Th



ANAGLYPTA—FRIEZE

By permission of The Anaglypta Co., Darwen, Lancashire.



SALAMANDER — "VENETIAN GOTHIC" FILLING
By permission of The United Asbestos Co., London, E.C.



AS — FRIEZE
astle Co., Edinburgh.

averaging generally about one-third more than in the case of the vellum. Quite different from the foregoing are the "Salamander" wall and ceiling decorations. These, as their name implies, are fireproof, being made of asbestos, and have more than once withstood the test of actual conflagration. The low-relief patterns vary from 8*d.* to 1*s.* 6*d.* a yard, and the high reliefs from 6*d.* to 12*s.* a square foot.

Among the best known of all decorative products of this kind is lincrusta, which is a solid material of extreme toughness and durability, moulded into relief by being passed between engraved steel rollers. The very large series of designs for dados, frillings, friezes, ceilings, panels, and generally for decorative purposes are made in one or two natural tints of walnut, buff, and others, which can be put up as they are, but, of course, like all the other relief decorations above mentioned, can be painted and further ornamented with colour to any extent. The prices of lincrusta run from about 1*s.* to 5*s.* a yard.

Hangings and Fabrics.—Textiles of various kinds, being also used as wall coverings, demand some notice here. They constitute, of course, a very old form of wall decoration, tapestry, made of woven materials either plain or enriched with hand embroidery, having been among the earliest devices for concealing bare and rough stone walls, and giving effects of comfort and splendour. The chief objection to the use of textiles as wall hangings at the present day is the fact that they so easily harbour dust and impurities, and are suggestive of a certain "stuffiness" which is not altogether agreeable to cultivated tastes. The principal materials that can be used for the purpose are chintzes, cretonnes, canvases and brocades, with various more or less close imitations of old tapestry work. Good tapestry panels copied from Flemish and other sources can often be bought at prices from 10*s.* to £10 each according to size and quality.

Either Indian or Chinese matting often forms a good and effective wall covering, especially for dados and in situations exposed to accidental blows and knocks. It should be fixed in such a manner that it may be easily taken down and thoroughly washed when necessary.

Arrangements and Accessories.—There are many ways of arranging the decorations of walls so as to produce the best effect, some of which must be noticed here. A dado is generally very useful, enabling one to provide the strongest material just where it gets the most wear, and, if necessary, to alter or replace it without interfering with the rest of the wall surface. Perhaps the best dado of all is good, sound wood panelling; it is, however, somewhat expensive to put up, and is therefore not to be recommended in a house that is only leased, unless, of course, some arrangement be made with the landlord. As has been previously noted, both lincrusta and matting form good, serviceable dados, as also do Japanese papers and some of the relief decorations already mentioned. With a good skirting-board below and a projecting rail above just at the height of an ordinary chair back, a dado affords efficient protection to the lower part of the wall from the impact of furniture and from chance knocks.



Fig. 18.—Frieze, in Lincrusta-Walton.
(By permission of Messrs. Fredk. Walton & Co., Ltd.)

A frieze is generally a pleasing feature in a room of good height, and its lower edge forms a convenient point for the fixing of the picture-rod or rail, but one should remember, in the case of low rooms, that both the dado and frieze detract from the apparent height of the apartment. Sometimes a frieze is used without a dado, when the skirting-board should be fairly high to give a base to the filling, as the space between is called. In bedrooms and minor apartments a border of ornament just underneath the cornice often gives a pleasing finish.

Ceilings should seldom or never be quite white, but should be very slightly tinted, so as to harmonise with the papering and general scheme of decoration. Cornices are also generally better for being picked out in soft tints to join the walls to the ceiling; and, of course, all the wood-work, as of doors and windows, must be painted in one or more colours, or tints of the same colour, in harmony with the wall coverings and the general effect of the whole.

Hanging and Fixing.—The hanging and fixing of wall-papers and relief decorations are usually and preferably executed by skilled workmen, but the householder also should try to understand the process, that he may be able not only to see that such work is properly carried out, but also to do it himself.

The first thing is, of course, the preparation of the walls, which, if of new plaster, will only require a coat of size. If there is old paper on the wall, this must, supposing the wall is tolerably sound, be stripped off by thoroughly wetting and scraping, when it will often be found that the bad practice of re-papering over old work has been adopted, and sometimes repeated several times. Not to imitate this unhealthy proceeding, one must strip right down to the plaster, cracks or defects in which must be made good with plaster of Paris before the coat of size is applied, previously to hanging the new paper.

The wall being ready, the paper has to be edged or trimmed quite close up to the pattern on one side and to within about a quarter of an inch of it

on the other. About half the paper required for the room must be close-trimmed on the right-hand edge and about half on the left, it being the rule to commence hanging the paper on each side of the principal window so that the overlapping piece at each joint may have its edges towards the light, in which position it is least visible. Trimming is best accomplished with a pair of paper-hangers' or other long scissors, the paper being unrolled and re-rolled as the operation progresses. It should then be cut into lengths an inch or so longer than the height of the room, care, of course, being taken about the matching of the pattern. The paper should next be laid the right side downwards on a long table or board and pasted with a fairly stiff paste made by mixing half a quartern of flour in a pail with a little clean water—avoiding lumps, and then adding boiling water and stirring until it thickens. A few drops of oil of cloves should be added as a preservative and antiseptic, and a dash of cold water on the top will prevent the formation of a skin as the paste cools. After the paper has been evenly coated with a large brush, it should stay for one or two minutes "in paste" to soak and expand, and if it is a very heavy, thick, or embossed paper, the pasting should be repeated. The lower part of the piece may then be folded, paste to paste, to facilitate handling, and the upper part fitted in its place on the wall, a plumb-line being used to see that it is exactly vertical. Then, while holding the lower part slightly away from the wall, the operator may gradually press it into place, working downwards from the top, and using a soft, clean, folded cloth or a brush. Care, of course, must be taken that none of the paste gets on the front of the paper, and any chance spots must be at once removed with a sponge and clean water.

The second piece is then applied with its close-trimmed edge lapping over the margin of the first, the pattern carefully matched and joined, and so on, until that side of the room is complete, when the other is worked in the same way. Most of the relief decorations require the addition of strong size or glue to the paste to give them a quick grip of the wall, and also demand a very great amount of care at the joints. Defects may be stopped with gesso or plaster of Paris.

TABLE FOR CALCULATING THE NUMBER OF PIECES OF ENGLISH PAPER REQUIRED FOR ANY ROOM.

Height of Room in feet (excluding skirting and cornice).	Measurement Round the Walls in feet (including doors, windows, &c.).																		
	28	32	36	40	44	48	52	56	60	64	68	72	76	80	84	88	92	96	100
	Number of pieces required.																		
7 to 7½	4	4	5	5	6	6	7	7	8	8	9	9	9	10	10	11	11	12	12
7½ „ 8	4	4	5	5	6	6	7	8	8	9	9	10	10	11	11	12	12	13	13
8 „ 8½	4	5	5	6	6	7	7	8	8	9	9	10	10	11	12	12	13	13	14
8½ „ 9	4	5	5	6	7	7	8	8	9	9	10	11	11	12	12	13	13	14	14
9 „ 9½	4	5	6	6	7	7	8	9	9	10	10	11	12	12	13	13	14	15	15
9½ „ 10	5	6	6	7	7	8	9	9	10	10	11	12	12	13	14	14	15	15	16
10 „ 10½	5	6	6	7	8	8	9	10	10	11	12	12	13	14	14	15	16	16	17
10½ „ 11	5	6	7	7	8	9	9	10	11	11	12	13	13	14	15	16	16	17	18
11 „ 11½	5	6	7	8	8	9	10	10	11	12	13	13	14	15	16	16	17	18	18

It is to be noted that the above calculations are for English wall-paper, each piece of which is 12 yards long and 21 inches wide. The pieces of French wall-paper, on the other hand, are 9 yards by 18 inches, and the Japanese 12 yards by 36 inches.

Another point of difference worth remembering with regard to these two kinds of papers is that discount of 33⅓ per cent off the maker's prices is sometimes allowed for the English and 25 per cent for the French papers. Many firms, however, refuse to make any deduction, and if the British Wall-paper Association succeeds in its endeavour it will put an end to the discount system.

STAINING OR PAINTING FLOORS.

By staining or painting a border from 1 to 2 feet in width round a floor, a good many yards of carpet may be saved, as well as the trouble of fitting into bow-windows and other awkward nooks and corners. Moreover, by leaving the floor close to the walls bare, the dust which collects there can be more easily removed, and when spring-cleaning comes the carpet can be taken up without its being necessary to move the sideboards and other heavy furniture.

Staining Fluids.—Oak, mahogany, and walnut are the kinds of stain which are generally used for floors. Walnut is, perhaps, the best for sitting-rooms, as it has the richest colour, but oak looks very well. Mahogany stain always has a reddish tinge, which can scarcely be called artistic.

Stains for floors are sold ready-mixed with varnish, so that both can be applied at once. Such mixtures are called varnish-stains. If the ordinary stains are used, a coat of varnish must be laid on afterwards. The latter process, if performed properly, gives a high finish to the floor, but the surface shows every scratch and mark, and soons gets spoilt unless great care is taken. The varnish-stains are, on the whole, the best to use, as they save a great deal of labour and last longer.

Preparing the Floor.—A line must first be ruled on the floor with a pencil and a straight piece of wood to mark the distance to which the stain is to extend. The width of the strip which is to be stained varies from 1 to 3 feet, according to taste or convenience. It should extend from 3 to 6 inches beyond the place where it will be covered by the carpet, in order that the latter may overlap it well all round. To try to save carpet by staining a very wide border is a mistake, for as such a border is sure to be walked on a great deal it soon becomes much worn, and the room is also darkened by the large area of dark floor. If a square of carpet is to be used in a room with bow-windows, the stained border must necessarily be broader in them than elsewhere.

Care must be taken that the floor is not greasy or dirty. It should be first brushed and then well washed. If at all rough, it can be smoothed

with a plane, all projecting nail-heads being first driven beneath the surface with a punch. A special plane is required for working close to the skirting-board, but either an ordinary jack-plane or a smoothing-plane will do for the open part. The former is the better, as it leaves the surface level and is an easier tool to use, but it must be sharp and properly set. Moreover, unless worked with the grain it will tear the wood up. The planing should be done so that no marks are left, otherwise it is better to leave the floor alone, for all such marks will show when the fluid is applied. When the floor has been planed, it should be examined obliquely from different directions; any rough parts and marks left by the tool will then be more easily seen. Uneven parts where two boards meet must be planed down. Some floors are quite smooth when they leave the builder's hands, but others are very badly made, being uneven, with a wide crack between every two boards. Not much good can be done to such floors, or to old floors which have had a good deal of rough usage, so it is best not to attempt to plane them. In the case of ordinary rooms, it is not always worth while to go to all this trouble, as a highly-finished surface is soon spoilt when trodden on, and if a dark stain is used, cracks and roughnesses on the floor are hardly noticed. As putty "takes" the staining fluid badly, it should not be used to stop up holes and cracks. Holes are best filled by hammering in plugs of wood and cutting them off level with a chisel.

As soon as the floor is quite smooth, a coat of size, made by dissolving one part of size in eight or nine parts of hot water, is laid on with a large fine-bristled brush. When dry, the floor is lightly touched with fine sand-paper, and is ready for the staining liquid.



Fig. 19. Fig. 20.
Flat Brushes (for staining).

Applying the Stain.—It is best to use two flat brushes with fine bristles, one about 1 inch and the other about 2 inches wide (figs. 19 and 20). The former is for working close to the skirting-board, the latter for doing the other part of the work; but with care one brush may be dispensed with. In applying the stain it is best to begin at a corner of the room, and take only one or two boards at a time. If more than two boards are done at once, the edge dries before more stain can be applied and a frilled mark is the result. This is especially likely to occur when using walnut varnish-stain, which dries very quickly.

The brush is worked rapidly up and down the grain, the part close to the skirting being finished with the narrow brush. The fluid must be applied quickly, for it dries in a few minutes. It must also be laid on evenly and rubbed in well, no spots being left uncovered. When a board is once begun it must be finished, otherwise an unsightly mark will be left where the edge has dried. If any of the fluid is dropped from the brush into the parts which have been

stained, it must be removed by drawing the brush up and down the grain. Especial care must be taken not to smear the skirting-board. This is very difficult to prevent when staining dark corners, or when the operator has his back to the window. It can only be remedied by wiping off the stain at once and washing well, but even then a smudge is often left.

There should be no frilling, as the boards seldom touch one another; but if it does occur, it can be removed by quickly drawing the nearly-dry brush up and down the joint. As the fluid takes about twenty-four hours to set thoroughly, dust should in the meantime be excluded as much as possible. At the end of that period, a second or third coat may, if necessary, be applied in the same manner. For bedrooms one coat is usually enough, but in other rooms the depth of colour should match the carpet and furniture.

When each coat is finished, the fluid is squeezed out of the brush, which is then washed in turpentine and dried. If it is at all stiff when next used, the bristles should be rubbed between the fingers or pressed against a piece of wood. When the fluid is contained in a bottle, the cork should be replaced at the end of the operation, and when it is in a tin, the lid must be closed securely. After the staining is finished, it is best not to walk on the floor, or place any heavy furniture on it, for two days at least. If the ordinary staining fluid has been used, a coat of varnish must be applied when the right depth of colour has been obtained. Ordinary oak varnish will do, but it must be laid on evenly with a brush with fine bristles.

Re-staining.—After some time the floor must inevitably show numerous scratches which take away colour, while much washing will lessen its lustre. It will then require re-staining. It is first well washed and allowed to dry thoroughly; if not quite dry when the fluid is applied, it will look dull when finished. The fluid is laid on exactly as before, but nc size is needed and only one coat. Doorways and other parts that have become damaged can be re-stained without going over the whole floor, but unless this is done carefully the work will look patchy. The edges of the re-stained portion should be softened off by rubbing with a nearly-dry brush. If the furniture and carpet are of light colour, or if it is desired to have plenty of light in the room, the floor should not be re-stained more often than is absolutely necessary, for every coat makes it darker. With care it will not require to be renewed for some years.

Floor Painting.—A border may be painted round a floor instead of being stained, and this has an additional advantage, as it can be applied over wood that has been discoloured or over cracks that have been filled with putty. The colour used depends upon taste, but it should harmonise with the other wood-work. Some idea may be obtained by placing a few sheets of coloured tissue-paper on the floor close to the wall. When the limit of the border has been marked by a pencil-line, the floor is made as smooth as possible with a plane, for painting does not hide a rough surface. Holes and cracks are filled with white-lead stopping, which must be well pressed in and carefully smoothed down with a putty-knife. Two brushes

are required for applying the paint, a small one for working close to the skirting-board and a large one for doing the rest. The paint must be laid on carefully and well rubbed in to avoid leaving any lumps. If bristles come off the brush, they should be picked out at once or they will stick when the paint dries. When the first coat is dry a second should be applied, unless expense and time must be taken into consideration. It is always a great improvement. Many persons finish with a coat of varnish, while others object to a glossy surface. The same precautions against rough usage must be taken as in the case of stained floors.

ARTISTIC DECORATION OF UGLY SURFACES.

The absolutely modern house is nothing if not artistic. Its walls may be thin and its wood-work scamped, but as a rule the papers are good in design and harmonious in colouring, while the stoves are of the slow-combustion kind, with tiled hearths and mantel-pieces that do not offend the eye even of the most fastidious.

The house that does offend is the villa of the fifties, with a flock-paper in the dining-room, a white-and-gold paper in the drawing-room; a white marble chimney-piece in the latter, and a black-polished slate or granite erection in the former. The tenant with artistic tastes votes them Philistine, and ignores the large windows and square proportions that make them light and airy to live in, and endeavours to harmonise them with the draperies and designs in which his soul delights.

A house built earlier in this century generally has low ceilings, small square or oblong sash-windows, all its wood-work being either painted a neat drab or grained in imitation of oak or maple. An Adams', a Queen Anne, or an Elizabethan house is rarely met with except in old country towns or villages, but when found is artistic enough for anyone, always supposing that it has not been modernised.

To Hide an Ugly Mantel-piece.—Perhaps the thing that most frequently exercises the mind of the modern house-seeker is the fire-grate,

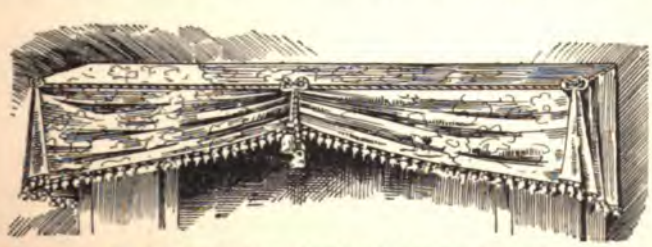


Fig. 21.—Simple Draping for Mantel-board in Art Serge.

with its white or black chimney-piece. A really good, bold, white statuary marble one is best left alone, but Sicilian marble with its yellowish stains,

which grow and increase with every year, especially on a clay soil, is distinctly unsightly.

There are two ways of disguising a chimney-piece of this sort. One is growing a trifle old-fashioned, but is very often the only method available where economy has to be studied. A plain board, covered with cloth or art serge, and slightly or considerably wider than the stone shelf, is fixed upon it. A border of the same serge is allowed to hang a quarter of a yard below it, and is finished with a ball-fringe to match, the border itself being embroidered with an artistic floral or conventional design. Under this, and close to the board, are iron rods along front and ends, on which plain curtains of serge or cloth are hung, so that they can be pulled backwards or forwards at pleasure. They quite cover the ugly jambs. Utrecht velvet is sometimes used for the purpose; but it cannot be embroidered, and looks far more pretentious than art serge, which is comparatively inexpensive.

Another plan is to have a complete wooden casing for the offending mantel-piece. It can be obtained in dark oak, unpolished pollard oak, or white wood, the last painted to match the doors and wainscotting of the room. A clever person, with the aid of a handy carpenter, can make a very smart casing with a little wood and some lincrusta, which can be stained and varnished, or enamelled, according to fancy.

A chimney-piece can also be hidden with cairene-work (fig. 22), a complete casing being procurable from more than one London firm. If desired, it can be made to measure. A valuable feature of this casing is that sliding lattice panels or doors can be arranged in the centre, which can be closed if the fire goes out, as it is often allowed to do on bright spring or autumn days when a little warmth is desirable at breakfast-time, but becomes oppressive as the morning wears on. To call a servant to sweep up the grate and re-lay the fire is not always convenient in a small household, but when these doors are shut everything is neat and tidy. They are also useful in the height of summer for concealing the grate, no further ornament being required.

An ugly chimney-piece in a bedroom or dressing-room may be effectually hidden in the manner so popular in France, by laying a long strip of hemstitched linen, embroidered or not, on the flat surface, to hang down a foot or so in front, and as much or more at the ends. It is, in fact, a sort of much elongated side-board cloth. An artistic mode of adorning it is by a set of medallions in lace-work, white or coloured, instead of embroidery. This is a very clean fashion, and looks fresh and dainty.

To Hide an Ugly Hearth.—There is no uglier surface than the bricked or stone hearth, whether it be blacked or whitened, and it is folly to whiten a stone that must be soiled by the first cinder or ash that falls on it. One of the great charms of the modern stove is the tiled hearth, which can be washed and kept clean; but it is expensive to lay, unless done when the house is built. A capital and not very costly substitute is an enamelled sheet of iron, which can be cut to the size of the hearth and fitted under

the grate. When it is bordered with a modern fender, or rather "curb", and finished with a pair of rests or "dogs" for the fire-irons, only the initiated can tell the difference.

To Hide a Gilt Overmantel.—The plain space of wall above the mantel-piece was for very many years covered with a plate-glass mirror, a great

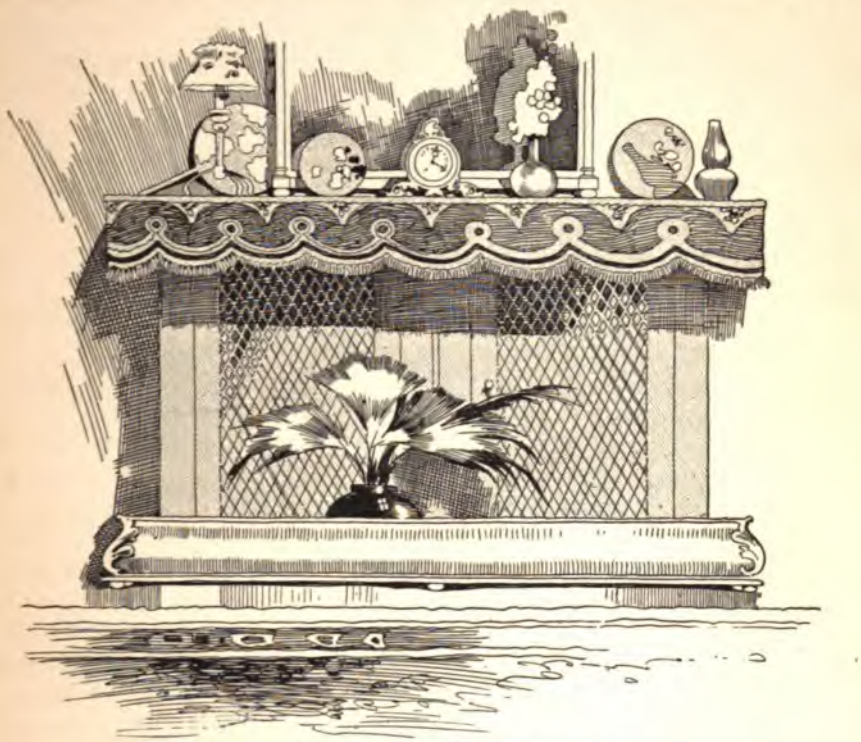


Fig. 22.—Chimney-piece cased with Cairene-work.

expanse of looking-glass in a more or less elaborate gilt frame. That was the taste of the Second Empire, when the Third Napoleon and his beautiful Empress reigned at the Tuileries. Such mirrors have long been banished from artistic houses, and the overmantels which succeeded them are fast following in their wake. Still, in a dark small room with a north aspect, a large mirror is not to be despised, because it reflects the light from the window, and makes the room much brighter and more cheerful, as well as adding to its apparent size. Having regard to the money value of the article in case it should ever be sold, it is not worth while to disturb the gilt frame, but it can be hidden from sight by a plain wooden mitred frame, covered with plush, velvet, or cloth, and put up over the glass so as to hide the gilt one. When this is done all garishness vanishes, and the mirror has quite a different appearance.

A Substitute for an Overmantel.—There is nothing so interesting over a mantel-piece as a picture, and a good oil-painting in oblong or oval

frame looks particularly well in a dining-room. If the space of wall is too large, and the picture looks small for it, a few china plates hung above and on either side look well. But care must be taken not to put the picture too high up; it ought to be low enough down to be comfortably looked at and examined.

If few are fortunate enough to possess fine or valuable oil-paintings, there are engravings to be had, sometimes mezzotints or photographic reproductions of good pictures, printed in a brown shade that suggests a modern mezzotint, or the reddish shade that suggests a Bartolozzi. This last tint is peculiarly suitable for copies from Sir Joshua Reynolds, Hoppner, Gainsborough, or Romney.

Beautiful reproductions of modern foreign pictures, artistically framed in unpolished wood, are frequently to be bought at ridiculously small prices from large stationers, and even drapers, in London and other large towns. They are distinctly good to live with, and transform a bare wall into a thing of beauty. Or for a drawing-room where the aim is to have everything as light as possible, charming little "bits" that nineteen people out of every twenty take for water-colour drawings, though they really are clever specimens of colour-printing, may be purchased for from 6*d.* to 2*s.* 6*d.* each, according to the size. With white mounts and simple unpretentious gilt or wooden frames, painted or enamelled, they form very tasteful decorations of what would otherwise be dreary expanses of paper or stucco.

A good way of filling up a space of wall between two windows is with a long narrow mirror in a wooden frame painted to match the door, such as may sometimes be seen in a shop. The aim is to get a streak of light, not to show off a smart mirror, and the frame is invisible on account of the curtains.

Cretonne Hangings for Walls.—Quite an artistic mode of covering up ugly walls is to hang them with cretonne, when tapestry is out of the question. In order to do this effectively a good colour scheme must be carefully thought out, with due regard to the aspect of the room. If it looks north and is sunless, a rose or yellow tint should be selected; or if it faces east or south and is often flooded with sunshine, a china blue or delicate green intermingled with white or cream is most suitable. The first thing desirable is a frieze painted in harmonising or contrasting colours. If a flat frieze is not liked, one that curves towards the ceiling may be obtained in papier-mâché or lincrusta. Any good firm of furnishing decorators will put it up. If, however, the room has a good cornice, a flat frieze will do, and there are quantities of papers in beautiful colourings and designs to choose from

Underneath this there is a frieze-rail, painted to match, with brass hooks on it for pictures, and this rail is fixed up just over where the cretonne hangings end, being hung by tiny brass rings on slender brass rods, so that it makes a neat finish both to the cretonne and to the lower edge of the frieze. Suitable cretonnes for this purpose may now be had at all really good furnishing shops. They are not calculated to retain their

position for an unlimited length of time; but they do not gather as much dirt as might be imagined, and if carefully unhooked and shaken, keep clean and fresh for a very long while. When they must be taken down and renovated, it is best to send them to some good firm of dyers who specially lay themselves out for the work.

Leather Panels for Walls.—Leather makes an extremely good covering for a wall. It is usually arranged in panels, the windowless end of a room, if not too large, perhaps forming one, with the centre and the border painted. A longer wall may be divided into two or three, but the sides of the windows, the space over the fireplace, and the recesses (if any) all give opportunities of making and ornamenting distinct panels. Leather is more suitable for a dining-room or hall than for any other rooms. Japanese leather-paper has very much taken its place of late years. A judicious intermixture of the plain and the embossed metallic varieties is very handsome and effective.

Matting for Walls.—Sometimes a room may have a pretty paper and frieze, but an ugly dado, or the lower part of the paper may be soiled, though the upper part is in good condition. In this case a simple cretonne or matting dado may be put up, finished by the dado-rail, which prevents the chairs from being pushed up too close to the wall.

Matting makes an artistic covering for a bare wall; and there are now many kinds of thin flexible matting woven of foreign reeds and grasses, bordered, chequered, or plain. It is not very expensive, and if firmly fixed is less easily injured than paper. Matting, when it covers the greater part of the wall surface, requires a frieze and rail, and is very pretty if put up diagonally instead of being hung straight. As a matting dado does not get scratched or torn like paper, it is particularly suitable for a staircase, up and down which boxes are sure to be carried sometimes (fig. 23).

Decoration of Door Panels.—The panels of doors, if not left plain, may be painted by an artist with flowers, reeds, and grasses, or with butterflies and birds. If birds are chosen they must have appropriate surroundings; the famous old "bird of Paradise resting on the tips of its claws on the stamens of a passion-flower" is as obsolete as it always was unnatural.

Japanese paper is an extremely artistic filling for door panels, but it must be carefully chosen to harmonise with the rest of the room. Sometimes when there is a particularly nice paper or cretonne on the walls, the door panels may be filled in with it. This gives a pleasant impression of completeness.

Decoration of Bath-room Walls.—People who are building or fitting up a house of their own, and wish to make it lasting as well as beautiful, should avoid paper and even matting on the walls of their bath-rooms and other apartments where the reigning idea is cleanliness, and cover them with flat tiles. The favourite blue-and-white tile has at any rate the advantage of cleanliness. But there are very beautiful tiles to be obtained from Minton or Doulton, each a little picture in itself. They cost little

more than plain tiles, and really are delights for ever. Geometric designs in good colouring are never inartistic; and there are tiles to tell stories, groups from Tennyson's "Idylls", from Schiller's "Bell", and many others, which, if set in as borderings or stripes or centres among plain tiles, are very beautiful.

Artistic Floorings.—Again, the floor of a hall or passage is a surface

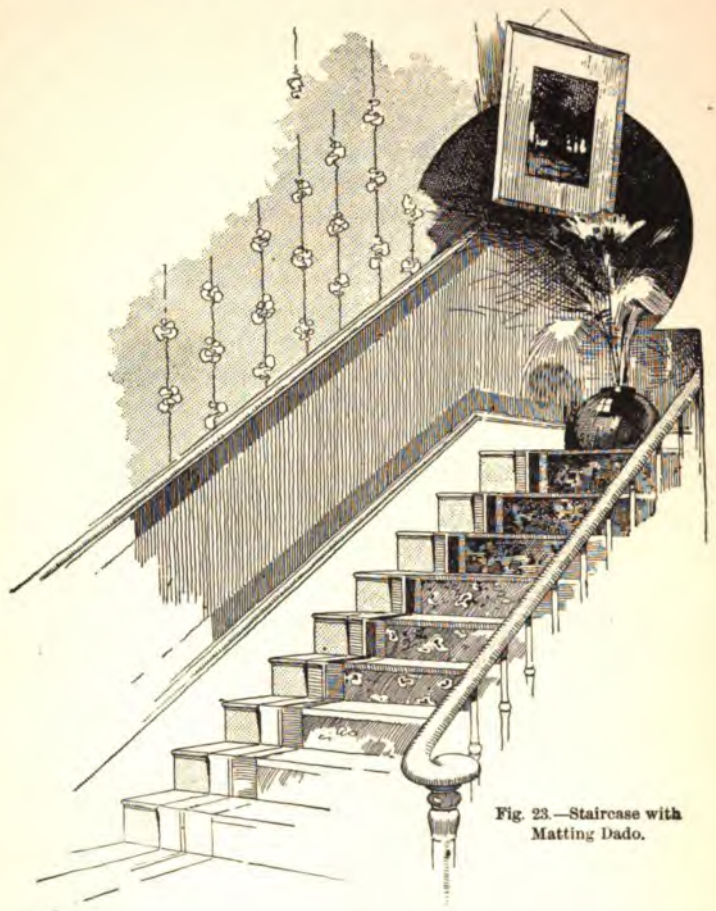


Fig. 23.—Staircase with Matting Dado.

too often disfigured by oil-cloth of more or less commonplace design. Why should it not be paved with encaustic tiles, which can be kept clean with very little labour, and save the expense of oil-cloth or any other floor covering? This was frequently done in houses built thirty or forty years ago, but seems to have fallen into disfavour merely as a freak of fashion, for no serious objection can be adduced against it.

A cheap, yet novel and beautiful, artistic flooring, introduced into England in recent years, has the sanction of Italian taste and antiquity, Milan and other cathedrals being floored with it. It consists of compara-

tively small wedge-shaped pieces of stone, black and white, which are easily laid in patterns in a bed of cement, the design being arranged according to the floor space it is intended to occupy. Of course, the generic name of all such work is mosaic, but that word represents to the popular mind something costly, which this is not.

A fine specimen of this flooring may be seen in the Church of St. John of Jerusalem, South Hackney, and it has also been adopted in smaller places in the East-end, and will no doubt become popular on account of its cleanliness and moderate price. It is particularly well adapted for walls and basements, serving every purpose of the handsomest tiles at a tithe of the cost, and, being simply a dull unpolished black and white, is never inartistic.

Wall Decoration.—One of the best means of improving ugly surfaces is by stencilling. A stencil-plate is a thin sheet of iron or zinc, or frequently of thick cardboard, with the design cut out in it. This stencil-plate is laid on a plain surface of plaster, specially prepared and colour-washed, and is then washed over with body colour. When the plate is removed the design appears on the wall. The greatest care must be taken to keep the plate straight and immovable, and also to avoid the least semblance of a smudge or smear. The walls of a staircase or of a hall above the dado may be so treated. A stencilled bordering above a chimney-piece often looks well, and does not interfere with pictures. Stencilling was formerly done in water-colour only, and had the reputation of speedily getting shabby; but now that oil-colour is used, and the plaster is prepared with oil, the design is more permanent, even on damp walls, whereas under the old conditions colour-washing and stencilling was irretrievably ruined by damp.

Painting in distemper is a well-known and time-honoured method of beautifying dull and monotonous surfaces. The best-known examples are in our Houses of Parliament, where historic pictures and cartoons by great artists adorn the walls. Unhappily in many cases the pigments have faded, but that seems a defect inseparable from all mural painting.

A splendid instance of how a huge and terribly ugly surface may be decorated is to be seen at the east end of All Saints Church, Margaret Street, Cavendish Square, London. It may almost be said to be a church built regardless of expense, though the plain courses of red and black brick were less costly than stone, and consequently there was all the more money to spend on the jewel-shafts of the low pillars and their exquisite capitals, and the marbles of the sanctuary. Behind it the architect found that a great warehouse or some other obstruction that no money could buy made an east window impossible; so the only alternative was to build a solid wall and cover it with frescoes, which was most successfully done. All Saints is no longer the artistic wonder it was thirty-five years ago, but as a specimen of beautiful and enduring wall decoration it is well worth seeing and studying.

Ceiling Decoration.—Ceilings are very often great bare spaces, and

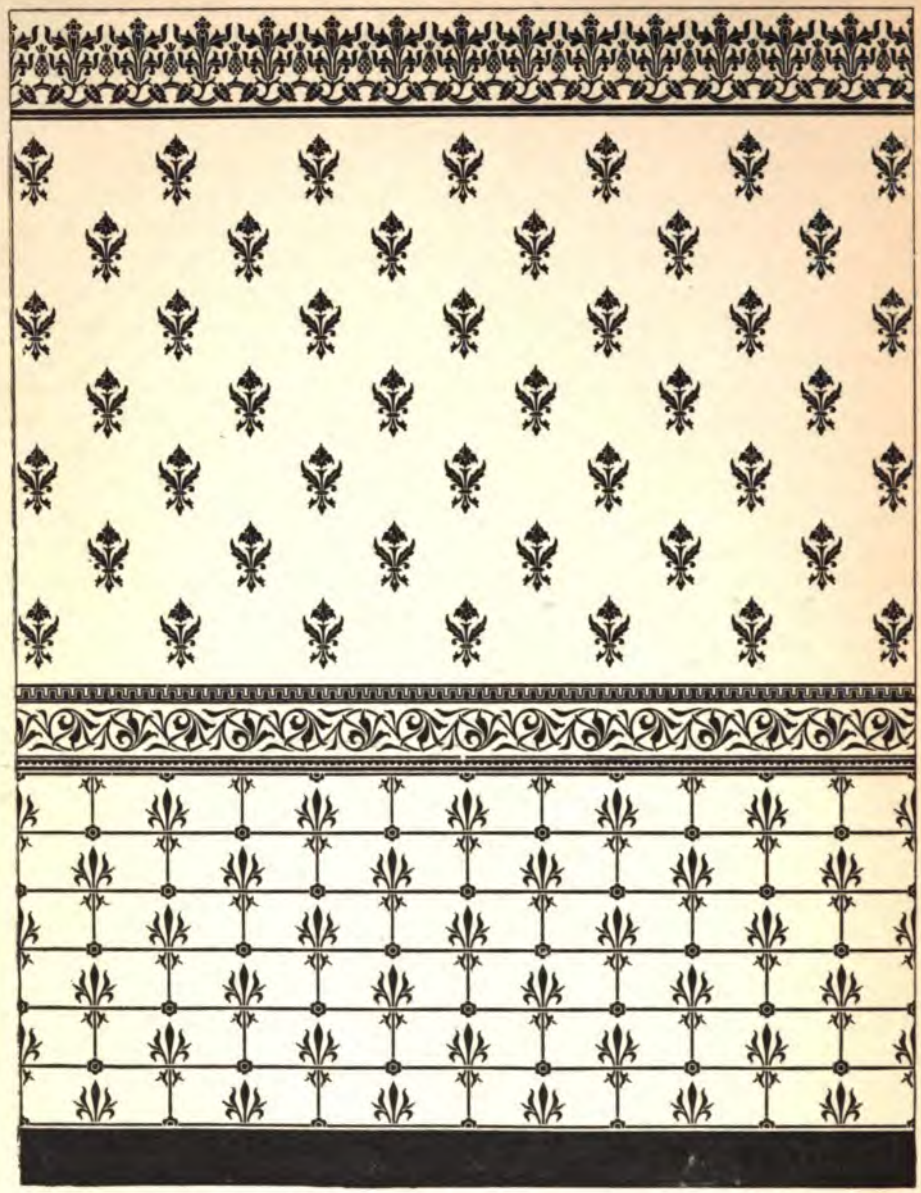


Fig. 24.—Design for Stencil Decoration of a Wall (Frieze, Filling, and Dado).[1]

until a very few years ago no one dreamed of having them anything but a glaring white, which, where much gas is burned, speedily becomes black and smoky. Some modern ceilings, however, are very delicately painted, and often stencilled in a manner that gradually continues the colour of the walls, so that there is no abrupt contrast. The centre is generally a

[1] Reduced from Audsley's *Practical Decorator* (Blackie & Son, Ltd.).

uniform pale tint. The best taste is that which leaves it a very light, almost a greenish blue, suggestive of the sky. A few years ago a clever artist photographer spangled her blue ceiling with gilt stars. To paint a ceiling in this manner is rather costly; but ceiling-papers are now made in small unobtrusive yet distinctly visible designs, and with borderings that soften the transition from them to the walls. This gives the whole room a subdued tone, and has the advantage of being easily and cheaply renewed. The great drawback of whitewash is that it splashes everywhere, but when a ceiling is papered there is no need to have the room entirely turned out. The carpet must be covered and the principal pieces of furniture removed to give free play to the steps and ladders, but a skilled ceiling-paperer certainly makes very little mess, and does his work quickly. There are still a few houses, principally in the country, where the ceiling is crossed by beams. If there should be oak wainscoat and wood-work, the beams are best painted to match; but, in any case, it is as well frankly to emphasise the fact that they are beams. If whitewashed or painted like the ceiling they look awkward, but if the wood-work of the rest of the room is white or a light clear colour, the beams can be painted to correspond, with the addition of something distinctive, such as a flight of swallows, or swallows in different poses, but not varying much in size. Poppies, roses, or chrysanthemums look well in such a position, but must be painted by a skilful hand.

FURNISHING THE HOUSE.

ESTIMATES OF COST.

The amount to be spent on furniture should depend on the capital available. Other factors are social status, number in family, and the size and position of the house selected. A snug little villa occupied by a couple with an income of £200 a year may be neatly and prettily furnished for £100; but, of course, those who can spend only that small sum must do without many things that richer people could buy. The same rule is applicable in all cases: Buy the essentials first, and let them be of good quality, suited in every way to their use. Pictures and ornaments can wait their turn. Modern houses are generally far too much crowded with unnecessary knick-knacks, and the principle that Ruskin has so long discoursed upon is a true one, that real beauty springs out of use. Put all the beauty possible into essential things—choose pretty patterns for carpets and wall-papers, elegant shapes for chairs and tables; and then, even if there are no vases or costly ornaments, their absence will not be much felt.

Avoid make-shifts in furnishing, and buy what is worth having. In many magazines articles are perpetually appearing, professing to instruct in the art of cheap furnishing. In these articles all sorts of expedients are resorted to, in order to bring the estimates low—dressing-tables being made out of packing-cases, arm-chairs metamorphosed out of barrels, and so forth. These hints may no doubt be of value in sudden emergency, as, for instance, when a house is filled with unexpected visitors and temporary furniture must be hastily provided. But, as permanent arrangements, make-shifts are most unsatisfactory. They give a shabby look to a house, besides being very uncomfortable. Even enamel, useful enough in its way, has been too much forced on the notice of economical housewives. One comes to loathe badly-painted chamber furniture, deck-chairs covered with gaudy cretonne, and similar delights of the "frugal mind". Plain and simple furniture is always in good taste, and, in these days when tradesmen cater for the million, can be had at very reasonable prices.

Instructions will be given later as to the best kinds of furniture to purchase. The present aim is to show how for a given sum a house can be adequately fitted up, and also in a general way to indicate the most suitable amounts to be spent on the different parts. A preliminary estimate is a great help to economy; it checks the expenditure on each item, prevents any important omissions, and secures fair treatment for every room. A splendid drawing-room is not in good taste when the bedrooms are shabby

and the kitchen has a scanty supply of pots and pans. A well-furnished house is one in which all the parts correspond.

In the case of a house furnished for £105 the following proportions would be suitable. It is supposed to contain seven rooms.

DINING-ROOM (£20).

	£	s.	d.
Carpet (Oriental square)	1	17	6
Winter curtains, Oriental striped serge	0	11	6
Summer lace curtains	0	4	6
Mahogany dining-table	2	17	6
Mahogany couch, covered with patent leather	2	2	0
Six chairs to match, 12*s.* 9*d.* each	3	16	6
Easy-chair to match	2	5	0
Mahogany or walnut sideboard	3	7	6
Book-shelves, with glass door	1	9	6
Fender, 6*s.* 6*d.*; fire-irons, 4*s.* 9*d.*	0	11	3
Coal-vase	0	4	6
	19	7	3

If preferred, the book-shelves can be sacrificed, and the extra value put into the carpet.

DRAWING-ROOM (£20).

	£	s.	d.
Parquet Brussels or Wilton carpet square...	3	5	0
Hearth-rug to match	0	12	6
Couch, 2 easy-chairs, and 6 other chairs	11	11	0
Guipure lace curtains...	0	7	6
Fender (brass and iron), 7*s.* 6*d.*; brass fire-irons, 5*s.* 6*d.*...	0	13	0
Coal-vase	0	6	6
Tortoise-shell bamboo overmantel	1	17	6
Walnut occasional table	1	9	6
	20	2	6

The estimate for the drawing-room, if put at £20, is slightly exceeded, but the deficit in dining-room expenses, if estimated at the same sum, covers this. As a rule, it is best to allow some margin for every room.

KITCHEN (£10).

	£	s.	d.
Plain deal kitchen table	0	12	6
Deal plate-rack	0	7	6
Deal Windsor arm-chair	0	8	6
2 deal ordinary chairs, 3*s.* 6*d.* each...	0	7	0
Kitchen hearth-rug	0	2	6
Fender and fire-irons...	0	8	0
2 doz. white-handled knives...	1	0	0
6 black-handled knives	0	3	3
Carving knife and fork	0	5	0
2 doz. plated forks	0	17	0
2 doz. dessert-spoons	0	8	6
2 doz. tea-spoons	0	4	0
Dinner service (50 pieces)	0	15	3
Tea-set (40 pieces)	0	7	11
Margin	3	13	1
	10	0	0

The margin allowed here is a fairly wide one; but it must cover all extra china and glass needed, plated dish-covers, and also all kitchen pots and pans, pails, brushes, and other kitchen requisites.

HALL AND LANDING (£5).

	£	s.	d.
6 yds. granite linoleum, at 3s. per yard	0	18	0
12 yds. wool Dutch stair-carpeting, at 1s. 5d. per yard ...	0	17	0
Stair rods, 1 doz.	0	5	6
Sinnet hall door-mats	0	2	0
6 other mats, at 1s. 6d. each	0	9	0
Hat and umbrella stand	1	5	6
Rug for landing	0	12	6
	4	9	6

GUEST-ROOM (£14).

	£	s.	d.
Bordered Brussels carpet square	1	2	6
Enamelled white bedroom suite, comprising wardrobe, chest of drawers, toilet table and glass, wash-stand, and 3 chairs	6	18	6
Handsome iron bedstead, full size, with bolster, pillows, and mattress	2	19	0
Fender, 3s. 9d.; fire-irons, 4s. 9d.	0	8	6
Toilet ware	0	12	9
Lace curtains	0	5	0
	12	6	3

The margin left here is for bed-hangings, if desired, tin bath, and so forth.

TWO BEDROOMS (EACH £10).

	£	s.	d.
Tapestry square Brussels, 9 ft. by 9 ft.	0	18	6
Suite in ash (wardrobe, wash-stand, dressing-table, and chairs)	5	15	0
Toilet ware	0	8	6
Fender, 2s. 11d.; fire-irons, 2s.	0	4	11
Black and brass French bedstead, with wire mattress, wool mattress, feather bolster, and pillows	2	10	0
Curtains	0	2	6
	9	19	5

SERVANT'S BEDROOM (£4).

	£	s.	d.
Woven hemp square	0	10	6
Iron bedstead and spring mattress combined	0	15	9
Mattress, bolster, and pillows (flock)	0	15	0
Chair, 3s. 6d.; toilet-glass, 3s. 6d.	0	7	0
Wash-stand and toilet ware	0	15	0
Chest of drawers	0	10	0
	3	13	3

The remaining £12 will not be found at all too much to spend on sheets, counterpanes, blankets, and other kinds of house-linen.

Where the sum of £500 can be allowed for furniture, such strict economy need not be practised, though the principle of allotting a certain share of money to each part of the house should still be kept in view. The house will, of course, be larger, and may be supposed to contain, besides dining- and drawing-rooms, a library, and five bedrooms, excluding the servant's room. In many ways it is easier to furnish with the larger sum, for economy need not be so closely studied, and suites of furniture for most of the rooms may be purchased, which saves much time and trouble. The £500 may be divided thus:—

DINING-ROOM.

	£	s.	d.
Turkey carpet, 16 ft. × 12 ft.	10	15	0
Turkey rug for window	1	5	6
2 pairs serge curtains, with silk dado, at £1, 1*s.* 9*d.* ...	2	3	6
Suite in best Morocco (couch, 2 easy, 6 other chairs) ...	36	15	0
Berlin black fender, £1, 5*s.*; coal-vase, 10*s.* 6*d.*	1	15	6
Fire-irons, 15*s.* 6*d.*; rests, 7*s.* 6*d.*	1	3	0
Carved oak or walnut sideboard, glass back	12	12	0
Dining-table	21	0	0
Oak dinner wagon, £3, 3*s.*; oak side-table, £3, 10*s.* ...	6	13	0
Oak overmantel, £3, 13*s.*; oak whatnot, £2, 17*s.* 6*d.* ...	6	10	6
	100	13	0

DRAWING-ROOM.

	£	s.	d.
Wilton carpet, 13½ ft. × 11¼ ft.	8	5	0
Angora skin hearth-rug	2	12	6
2 pairs silk chenille curtains, at £4, 4*s.*	8	8	0
2 pairs frilled lace curtains, at 11*s.* 9*d.*	1	3	6
Couch, 2 easy, 2 occasional, and 4 other chairs	26	5	0
Brass fender, £1, 15*s.* 6*d.*; coal-vase, 14*s.* 6*d.*	2	10	0
Brass fire-irons, 18*s.* 6*d.*; rests, 12*s.* 6*d.*	1	11	0
Artistic dark mahogany cabinet	3	17	6
Overmantel	3	12	6
3 tables of various designs	8	0	0
Mahogany cosy corner, with silk cushions	14	10	0
	80	15	0

STUDY.

	£	s.	d.
Seamless Axminster carpet, 10 ft. × 9 ft.	4	17	6
Turkey rug	1	1	0
Serge curtains, 2 pairs at £1 each	2	0	0
Steel fender	0	7	6
Steel fire-irons	0	10	6
Writing-table, with leather top and drawers	5	15	0
High carved book-shelves	7	10	0
Side-table, pedestal, carved	5	10	0
2 leather-covered arm-chairs, at £2, 5*s.*	4	10	0
6 oak rush-seated chairs, at 12*s.* 9*d.*	3	16	6
Oak corner-chair	2	7	0
	38	5	0

HALL AND LANDING.

	£	s.	d.
10 yds. linoleum, at 3s. 6d.	1	15	0
2 wolf-skin mats, at £2, 2s.	4	4	0
6 patterned cocoa-nut mats, at 9s. 6d.	2	17	0
Hall-door mat	0	8	0
Hall table (monk's bench forming seat or table with box)	4	10	0
Oak hall-rack	0	14	9
3 carved oak chairs, at 19s. 6d. each	2	18	6
Oak corner-table	0	19	6
Hat and umbrella stand	6	12	6
20 yds. Axminster pile stair and landing carpet, at 4s. 3d. per yard	4	5	0
6 mats for bedroom doors, at 3s. 3d.	0	19	6
Carved table on landing	2	10	0
	32	13	9

PANTRY.

	£	s.	d.
Plate-chest, containing knives, carving-knives, forks, spoons, and all plate necessary	14	17	9
Dinner-service	10	10	0
Tea and breakfast service	5	5	0
Afternoon tea-set	0	15	6
Dessert-service	4	10	0
Wine-glasses, water-bottles, and tumblers	2	10	0
	38	8	3

KITCHEN.

	£	s.	d.
12 yds. cocoa-nut fibre, at 1s. 3d. per yard	0	15	0
Yarn hearth-rug	0	5	9
Kitchen set (table, chairs, and all necessary kitchen utensils)	12	12	0
	13	12	9

Complete sets of everything wanted in the kitchen can be bought, and this spares householders much trouble in choosing. If superfluous articles are contained in these sets they may be exchanged for others, or rejected, the price being reduced accordingly.

GUEST-ROOM.

	£	s.	d.
Tapestry Brussels carpet, best quality, 15 ft. × 13½ ft. ...	4	0	0
2 Indian rugs, for hearth and bedside, at 10s. 6d. ...	1	1	0
Felt bath square mat	0	5	0
Ash bedroom suite, comprising combination wardrobe, toilet-table with glass, marble wash-stand, towel-rail, and three chairs	26	5	0
Fender, 3s. 9d.; fire-irons, 3s. 6d.	0	11	3
Toilet ware	1	15	0
Brass bedstead, full size	4	18	0
Bedding (wool mattress, feather bolster, and pillows) ...	3	0	0
Cretonne hangings, best quality	2	0	0
Lace curtains, 2 pairs at 13s. 3d.	1	10	6
	45	5	9

BEDROOM.

	£	s.	d.
Tapestry Brussels carpet, second quality	3	15	6
2 Kurd rugs, at 7*s.* 6*d.*	0	15	0
Linoleum bath mat	0	2	6
Art green bedroom suite	17	10	0
Fender, 5*s.* 9*d.*; fire-irons, 5*s.* 6*d.*	0	11	3
Curtains, 2 pairs at 10*s.* 6*d.*	1	1	0
Brass bedstead	3	10	0
Bedding	2	2	0
Hangings	1	10	0
Toilet ware	1	5	0
	32	2	3

SECOND BEDROOM.

	£	s.	d.
Kidderminster square carpet	3	0	0
2 fringed rugs to match, at 5*s.* 11*d.*...	0	11	10
Walnut bedroom suite	15	15	0
Fender, 3*s.* 9*d.*; fire-irons, 4*s.* 6*d.*	0	8	3
Toilet ware	0	15	0
Curtains, 2 pairs, at 10*s.*	1	0	0
Bedstead, £3, 10*s.*; bedding, £2	5	10	0
Hangings	1	10	0
	28	10	1

The remaining two bedrooms may be set down for the same amount though suites may be bought for £8, 8*s.*

SERVANT'S BEDROOM.

	£	s.	d.
12 yards of Dutch carpet, at 1*s.* per yard	0	12	0
2 slip mats, at 2*s.* 11*d.*	0	5	10
White enamelled bedroom suite, with toilet table, glass, wash-stand, chest of drawers, and one chair... ...	4	4	0
Bedstead	1	0	0
Bedding	0	10	6
Hangings	0	5	0
Toilet ware	0	3	6
Curtains	0	3	0
	7	3	10

The remainder of the £500, about £25, will be needed for house-linen, blankets, &c. Lists of the quantities required, and prices, will be found in another section.

THE HIRE SYSTEM.

To young couples who contemplate marriage on small means the Hire System offers a convenient solution of a very awkward problem. They are apt, however, to forget that it has some serious disadvantages. The system looks so easy and so pleasant. A small payment weekly, monthly,

or quarterly—surely they can manage that without any difficulty; and then, at the end of three years the furniture becomes their own. So, having procured the consent of two friendly householders to act as references, they proceed to select what they consider necessary, and as they are not required to pay cash are frequently tempted to spend very much more than they would otherwise have done.

Assuming, however, that they exercise due prudence in this respect, and are careful to avoid the kind of hire-purchase establishment in which old furniture is "dodged up" and sold as new, there still remains a strong economical objection against the system. In the most favourable case the interest varies from five to ten per cent per annum, but, as it is always charged on the first total and not on the balance remaining after the payment of each instalment, the rate is enormously higher. If the nominal value of the furniture is £200, it costs under the hire-purchase system (the interest being calculated at ten per cent) £260 altogether on a three years' agreement, which is the usual one. Moreover, in purchasing for cash a considerable discount will almost invariably be allowed on an order for £200. It must further be remembered that under many hire-purchase agreements the buyer is liable to forfeit the whole of his previous payments if he fails in a single instalment directly it becomes due. This is a very serious consideration for those whose incomes are fluctuating.

In general, it may be said that no one should resort to the hire-purchase system who has not a settled income large enough to defray all the household expenses and the instalments as well, with a margin for the emergencies which invariably crop up in a new house.

SECOND-HAND FURNITURE.

There is a great charm in having everything new in a new house; and householders of a former day were proud to point to their furniture and say, "Such was the fashion when I married", or, "when I furnished my house". But when means are insufficient, such satisfaction must be foregone.

Second-hand furniture is far better than articles unpaid for or bought on hire. New things, it should be remembered, are always expensive, and the tradesman who fills his shop with new-fashioned goods has had to pay a comparatively large price for them, and expects to get a high profit in his turn. In the case of second-hand furniture somebody else has paid that high profit, and if one is willing to put up with a slight loss of freshness and fashion, good substantial articles may be had at a very great reduction.

Second-hand furniture has also another advantage. Its momentary dearness when it was "the fashion" departed before the second owner

acquired it; its real value remains. If he has chosen the right kind of article, twenty years of wear will leave it almost as good as at first, and not unlikely to fetch as much in the market should it again have to be brought under the auctioneer's hammer.

If due care and thought are given to the purchase of second-hand furniture, a little money will go a long way in making a house comfortable. At the same time there is no very great likelihood that one will thus be able to obtain valuable articles at much below their real worth. The craze for the antique has now lasted so long, that at almost every auction dealers are present who know better than any amateur the value of old Chippendale chairs or inlaid card-tables. Old furniture shops, too, though often hidden away in obscure streets or country villages, are known to connoisseurs, who quickly pounce upon any article of real value. The householder who expects to furnish his house artistically for a few pounds will probably find himself with nothing better than a collection of worthless and useless sham antiques. But the buyer who is wisely content with plain, substantial furniture, and willing to give a fair price for it, will often be astonished how cheaply he can obtain what he wants.



Fig. 24A.—Old Chippendale Bookcase.

This is an ordinary Chippendale cabinet of orthodox style and construction, made probably about the year 1760. It sold for £136, 10s. at Messrs. Christie's sale-rooms, London, in 1897.

Auction Sales.—Second-hand furniture can be bought either at auction sales, or in second-hand shops. The former have several advantages. As the furniture is often sold at the owner's house, the purchaser has the chance of seeing whether it comes to him out of clean and sanitary sur-

roundings. In this way whole sets of furniture may sometimes be secured, chairs, carpets, curtains, all corresponding in colour and quality, while only the auctioneer's profit has to be paid on the goods.

Whether it is or is not advisable to employ a broker at the cost of five or ten per cent of the purchase money is open to question, but, in any case, the purchaser should himself be present at the sale in order to make sure that the furniture has been knocked down to him at the price named.

At most auctions opportunity is given for examining the goods beforehand, and this should be taken advantage of. Curtains and carpets should be carefully turned over, to see if moths have attacked them; the seats, top and bottom, of stuffed chairs should be examined in the same way (maggots often establishing themselves unsuspected in the woollen stuffing), and wooden articles should be carefully searched for traces of worms.

A word of warning must be uttered about buying wooden bedsteads second-hand. Many that are most solid and handsome have become the abode of insects, and when once these creatures have established themselves in a wooden bedstead, it is almost impossible to extirpate them. If new wooden bedsteads cannot be obtained, choose iron or brass. Glass and china articles may often be picked up cheaply at an auction. One or two pieces broken or chipped in a set affect greatly the selling price, but for household use this scarcely matters at all. Plate is not to be bought at a correspondingly low rate, since old silver has a permanent value; but such things as knives and general ironmongery may, as a rule, be safely purchased at a genuine auction sale.

When it is not possible to purchase entire suites of furniture, much thought and good taste on the part of the buyer are necessary, otherwise his furniture will look like, what in fact it will be, a mere chance collection. He must keep his bargaining instincts firmly in check, and not allow himself to buy anything unsuitable, however cheap and good it may appear. A polished-pine dressing-table and a mahogany wardrobe, though each may be handsome in itself, will not look well together in the same room; neither will a scarlet carpet and crimson chairs. If the buyer of second-hand furniture makes unobtrusiveness a leading quality in his purchases, he will generally find that, although brought together from many quarters, they harmonize with one another. To anyone gifted with taste and resource the choice and fitting together of diverse bits will be a real pleasure, and the result something more characteristic and truly beautiful than a room arranged by an ordinary upholsterer. But this requires much time and thought. And in truth economy almost always requires a large expenditure of both.

Second-hand Shops.—To attend auctions may need more leisure than the householder possesses, since they usually take place in the business hours of the day. The next resource is the second-hand dealer's shop, where for a slightly greater charge he may sometimes suit himself as well as at

the sales. Of course in this case he is quite in the dark as to the source whence the goods have come, and he had therefore better buy nothing that cannot be well purified by soap and water or other disinfectants. Goods sometimes become injured by damp or careless handling while in the dealer's warehouses, and the buyer should be on the look-out for chipped corners, wooden mouldings that have become unglued, missing keys, damaged locks, broken hinges, and similar defects, and should insist on having such injuries repaired.

Bogus Sales.—Purchasers of second-hand furniture should always be on their guard against bogus sales, which are unfortunately too common. It is a frequent practice with some auctioneers to hire an empty house, to fill it with showy but worthless furniture, and then to announce a sale. As a special attraction to purchasers, it is often called a "compulsory sale", though in some cases such reasons as "owner going abroad" are given. Those who are ignorant of the trick are very apt to be deceived; and, imagining that they are having a chance of getting genuine bargains, they offer large sums for what would be dear at a gift. Not seldom the furniture is the cast-off stock of second-hand dealers, who attend in person to bid up the prices of their own goods. In fact, the field for swindling is such a large one that it is impossible to point out all the pitfalls. The only safe rule is this: unless it is quite clear that the articles offered for sale are the property of a respectable householder, the outside public had better keep away. The dealers can then have all the fun to themselves, and nobody will be any the worse.

Very many picture sales should also be avoided. When they are carried on in dark shops, with the fronts removed so that the passers-by may see what is going on and be tempted inside, they should always be regarded with suspicion. Only too often the pictures are utterly worthless, foreign prints or oleographs, set in cheap gilt frames which will look shabby almost immediately. Decoys are posted here and there to attract bidders and run up prices. When they fail, the auctioneer abruptly terminates the proceedings, only to make a fresh start on the following day. These are not the places to buy pictures at.

FURNITURE REMOVALS.

Household removals, to one who has had experience of them, leave in the memory a picture of chaos, discomfort, and fatigue. In a degree these are inevitable accompaniments of a removal, but thought, experience, and advice will lessen them greatly.

Sorting the Furniture. — The business of furniture removal begins with a survey of the new dwelling. Should the carpets be obviously unsuited in size to the new rooms, should chairs and tables be too big and heavy or too small and insignificant-looking for their fresh surroundings, they must either be assigned a different place in the household

arrangements, or parted with. It is far easier to sort the furniture out before leaving the old home; and by doing so one avoids paying for the removal of what will not be used. Each room of the new house should be carefully considered, and the furniture mentally apportioned to it; this will save much time and trouble. Lists for the different rooms should be made, and carpets that are to be changed from the lower rooms to the upper, or half-worn furniture that must be relegated from better use to inferior, should be carefully noted down. Any surplus old furniture that is really not needed can be sold. A dealer will probably give a lump sum for all the articles, and take them away himself. The prices so given will no doubt seem very low, but unnecessary things are best out of the way. Sometimes separate articles can be sold privately to friends, or given away to old servants and the poor, by whom they will be much appreciated.

Preliminary Arrangements.—After the furniture has been sorted out, the new house must be made ready in every way for its contents. It will not do to put furniture into dirty rooms; therefore floors should be scrubbed, ceilings whitewashed (if necessary), paint cleaned. Door-locks and window-fastenings must be examined. Taps and pipes also should be investigated to ensure their being in good working order. Drains and sanitary arrangements should have been inspected before the house was taken; if for any reason this was neglected before, it should be done now. Chimneys should be swept; for an outgoing tenant is not generally very thoughtful of his successor's well-being, and the first fire lit in a new house often brings smoke and smuts instead of a cheerful blaze. Damp places in the kitchens, where black-beetles are apt to hide, or other suspected abodes of insects or vermin upstairs or down, should be searched out, and remedies, if needed, applied, as these troubles are more easily dealt with in bare than in furnished rooms. Unless the weather is exceedingly warm and dry, fires should be lighted all over the house, and windows opened for a day or two before it is entered. The atmosphere of a house that has been vacant and shut up, if only for a week or two, is apt to be damp and injurious to health.

Practised Removers Best.—When the new house has been put in order, removal must commence. In most cases it is decidedly best to call in the aid of experienced removers. In most provincial towns there are several firms who can accomplish the business well, and whose prices do not exceed the terms charged by London removers. Dwellers in the provinces who have only short removes to make cannot do better than apply to some firm near them, for one usually gets the best service at the hands of neighbours. For Londoners, and for those who must convey their household goods to a long distance, there are many well-known removers whose names are a guarantee for care and promptness, and whose wide connections render it easy for them to transport furniture by road, rail, or sea.

Such firms usually send a representative, who looks round the house, calculates the amount of furniture to be removed, and makes an estimate accordingly. Punctually on the day appointed the large vans appear. With the skill that comes of long practice, the men stow sofas, pianos, arm-

chairs into the smallest possible space, with also the least possible risk of damage. The larger, heavier pieces of furniture may be left entirely to their care; for they can take down bedsteads or lift pianos with far greater skill and speed than any amateur helper.

Packing Choice Things.—It must not be forgotten that if the owners pack any goods themselves, the firm of removers is not responsible for any breakages among those goods. Still, many persons prefer to pack a few choice things themselves, and one may profitably spend the last few days previous to the actual date of removal in packing—putting together some of the lighter household articles. Chests of drawers should be emptied, and their contents placed in travelling trunks. Some household authorities advocate leaving the drawers filled, arguing that each drawer must be taken from the chest to be moved, and that they may as well be full as empty. No one who has tried the experiment would repeat it. Open drawers cannot be packed as tightly as closed boxes, and therefore the articles necessarily receive a shaking on the journey. At the end of it they are probably lifted out on end, perhaps turned upside down, and the result is a soiled, confused jumble, sad for a housewife's eyes to contemplate. All personal clothing should be packed, of course; and then plate, wrapped, if necessary, in cotton-wool or flannel, to avoid scratches, may be put away in a locked chest.

Any light, delicate china or glass may be next attended to; for, however well the professional packers do their work, they have much to handle, and one slip or crash may ruin a cherished possession. Light wooden boxes or wicker crates are very suitable for holding fragile articles; the nearest grocer will most likely be able to supply plenty of empty soap-boxes for a trifle. Each piece of china should be thickly enveloped in soft paper, and then straw or saw-dust will form a good bed for the whole. Books may be packed in boxes, with some of the household linen to serve as an upper and under covering; this preserves choice bindings from damage. Mantel-shelf clocks, especially if of great value, should each have a separate case of its own. It goes without saying that the heavy pendulum must be taken carefully off before any clock is moved. Valuable pictures may also be packed, with a cloth over the surfaces of oiled canvas to prevent their being scratched, and with very thick layers of paper and wadding in the case of glazed frames. There is no reason why every household treasure should not reach its new abode in perfect safety; but this result can only be secured by the utmost care in packing.

Packing Carpets and Curtains.—Carpets may be taken up and rolled together, mats collected, curtains taken down and folded up before the day of removal. The furniture removers undertake to do these things, but it greatly expedites matters to have them already done; and removing is a slow and tedious process which every householder is glad to have shortened. Blankets, pillows, eider-down quilts, and feather-beds should be put into the smallest possible compass, and are better for having a covering tacked lightly over them. This preserves them from tearing and from damp. The

removal may take place on a wet day, and damp beds are most dangerous. Any articles needed at once ought to be in marked boxes, for it is very trying to have to search in a dozen places before the teapot, knives and forks, or any other indispensable things can be found.

Procedure on Arrival of Furniture.—When the furniture arrives at the new house, the removers are bound to carry it in, lay down carpets, and put up bedsteads, mirrors, and pictures. The mistress had better be present while this is going on, and if she has made two lists of the furniture for each room—one for her own use, one for the workmen—it will greatly help the work forward. It is always a weary time, and even when the lumbering vans have gone, leaving behind a litter of straw and paper, the quietude that falls upon the scene is only temporary. For there is yet but a bare bleak house, and much must be done before it is converted into a home. At this stage a handy man with some knowledge of carpentering is most useful. There are shelves and brackets to be fixed, pictures to be hung, and, alas! only too often, many valuable articles of furniture to be repaired.

Prices.—The charges of professional removers vary slightly; they depend on the amount of furniture to be moved, and the number of miles it must be carried. Where it has to be conveyed by rail the distances of the old house and of the new from their respective railway-stations are reckoned. Speaking broadly, the furniture of an eight-roomed house can be removed under three miles by road for from £3 to £4. The contents of a ten-roomed house, if not too far from the station, can be transported fifty miles by rail for from £8 to £12.

FLOOR-COVERINGS.

In furnishing a house (as in every other affair in life) care and attention should be concentrated on the essentials. What is the first necessary in every room? Is it not some sort of floor-covering, whether in the shape of carpets, rugs, or tiles? These are the first things touched on entering a house, and the first to strike the eye. A hall prettily tiled or covered with handsome floor-cloth makes a pleasant impression at once on the incomer; and a room with a carpet of beautiful design is half-furnished—comparatively plain chairs and tables will be set off by it.

Three things are to be considered in choosing floor-coverings: they are beauty, health, and economy. The last may seem the most important, but the other two should have due consideration also. Beauty in these days has many advocates, and rightly. Harmony of form and colour produces a great mental effect; and the inmates of a house brightly and prettily fitted up have a better chance of keeping well and cheerful than those who inhabit a sombre, dingily-coloured dwelling.

Ancient Floorings.—When the caves in which our aboriginal forefathers lived were exchanged for houses the question of floor-coverings

early came up. The primæval hut-dweller seems to have protected his feet from cold or damp by laying circles of pebbles round about his hearth. These gave way in time to the splendid marble pavements made familiar by Alma Tadema's pictures, and to the mosaic floors with which wealthy Romans in all lands adorned their houses. Those who have had the privilege to see any of these specimens of ancient art will have received new ideas on the subject of floor-coverings. The mosaic floors were composed of thousands of tiny blocks of coloured pottery, each about an inch square. These were arranged in oval medallions inclosing figures or scenes, and surrounded by borders of rich and varied design. The subdued mellow glow of the tints, the lightness and grace of the effects produced, may be studied with profit by those who wish to produce beauty and harmony in their houses.

Colour.—Colour in floor-coverings is a matter of great importance. The carpet of a room generally strikes the key-note of colour to which all the rest of the furniture must be modulated. Certain hues are best suited to certain rooms, but such considerations as aspect must often prevent any arbitrary rule from being laid down. Speaking generally, the dining-room should possess a carpet of warm rich tint in harmony with the hospitable character of the room—deep garnet shades, ruddy browns, or the mingled dark-reds and rich blues of Turkish fabrics. In the drawing-room, lighter, more flower-like hues are appropriate, mixtures of white and green, with touches of pink or even blue. As a rule, however, blues should be avoided in carpets. Blue is a cold colour, suggestive of shadow, and the sombre skies of England make anything that conveys the ideas of warmth and sunshine valuable. Drab or gray carpets are inadvisable for the same reason. Economical housekeepers favour them because they do not show dust as darker ones do, but their Quaker-like monotony is repellent.

The most permanent and best-wearing colours in carpets are dark-reds, dark-greens, and browns. The three primary colours, as is well known, are blue, red, and yellow. Of these, red is the most enduring. Yellow dyes are almost always extremely fugitive, and even those shades of red which approach most nearly to yellow, such as scarlet and vermilion, are to be avoided. Green is a combination of blue and yellow, and in light-green, yellow usually predominates, and these hues are therefore liable to fade. Pink and purple are a mixture of blue and red, the two colours being formed, of course, by different proportions of the ingredients. These two hues cannot be recommended, because, where two colours have been used to produce a third, one of the primary hues is apt to disappear sooner than the other, and so spoil the tint produced. Vegetable dyes, such as madder, logwood, and indigo, are, as a rule, more lasting than the dyes derived from mineral substances, such as gamboge. The brilliant aniline colours extracted in recent years from coal-tar are notoriously fugitive.

Turkey Carpets.—In the dining-room, as already stated, sober richness should be the effect aimed at, and for this purpose nothing equals a Turkey or Persian carpet. These fabrics of the East date back to remote times,

and are still produced by methods of primitive simplicity. They are all hand-made. The loom is filled with hanging perpendicular strands of strong linen thread of the number and length required to make a carpet. On these the weaver ties little tufts of wool with woollen yarn, and when a row of these tufts has been placed across, with a strong transverse linen weft, she (the weaver is usually a woman) binds the line compactly in. When the carpet is finished, the wool is sheared all over to make the surface even, but not too closely or the carpet will soon wear. After the shearing the tufts are still perceptible, and form a characteristic by which Turkey carpets may be easily known.

No hearth-rug is needed with these carpets, as it would interfere with the effect of the design. Even to cover them with a dining-table is to spoil their appearance in a degree, though of course this cannot be avoided in English houses. In the earliest historic times carpets were only intended to be strewn before couches, and in Turkey they are only spread on the raised dais in front of a divan, where nothing hides any part of the pattern, which radiates, as it were, from the sides to the centre. They are woven, border and all, in one piece, and should never be cut. A true Turkey carpet contains no green, the sacred colour of the Mohammedans, nor the imitation of any living form. They are said to be an attempt at copying inlaid-jewel work, and this accounts for the gem-like brilliancy of their tones. A good Turkey carpet may seem an expensive purchase, but nothing wears or looks so well; and if economy must rule, a small square of Turkey carpet in the centre of the floor, with a stained border, will give a richer effect than carpeting the entire room with an inferior fabric.

Brussels Carpets.—Brussels carpets rank in beauty next to Turkey. The speciality of their manufacture lies in the mixtures of linen and wool.



Fig. 25.—Section of Brussels Carpet. The pattern is formed by bringing to the surface, at any particular spot, such of the coloured yarns as are required, and they are formed into loops by being turned over wires (*w*). The wires are afterwards withdrawn.

The under part of the carpet (fig. 25) consists of a strong linen web parallel with which, in the upper surface, run strands of worsted. This gives to a Brussels carpet, when looked at, the appearance of a succession of fine ridges. Two sets of worsted threads are woven transversely over and under the parallel woollen strands, binding them solidly and compactly together, at the same time raising them in tiny loops. These loops add greatly to the wearing power of the carpet; they present no rough ends to be easily worn or torn away, and yet, being in a measure loose, they yield when trodden, and can bear a great deal of use without showing it. The stout woollen threads beneath and the strong woollen yarn on the surface

form a combination not to be surpassed for durability. The complicated method of weaving, and the beauty of the designs often used, make these articles necessarily expensive, but the purchase of a good Brussels carpet is seldom regretted, as it will do long duty in drawing-room or dining-room, and when at length a little faded or torn, it may be cut into bedroom carpets or rugs, and again wear for an unlimited period.

Wilton Carpets.—Wilton carpets resemble Brussels in the method of weaving, but the loops of wool in them are cut, which gives a velvet-like appearance; hence they are often called velvet-pile carpets.

Tapestry.—Another variety in the same style of weaving is known as tapestry (fig. 26), but these carpets are inferior to Brussels and Wilton in

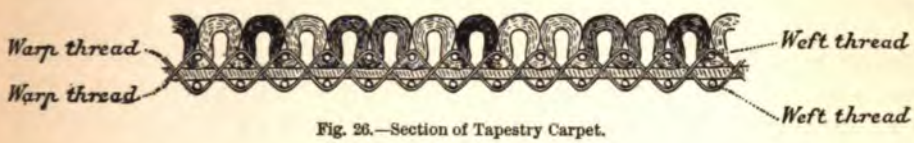


Fig. 26.—Section of Tapestry Carpet.

some respects. In the latter as many threads of yarn are used as there are colours in the fabric, so that when one tint disappears from a part of the design, the yarn is continued below the surface till it appears in the pattern again, thus adding to the strength of the whole. But in tapestry carpets only one long yarn is used, which is dyed in different parts of its length to the various colours needed.

Axminster Carpets.—Axminster carpets (fig. 27) are manufactured very similarly to Turkey, with the linen web and worsted tufts. But they

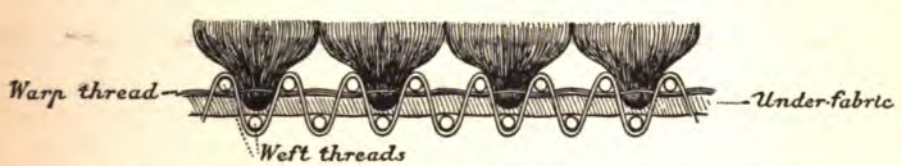


Fig. 27.—Section of Axminster Carpet. The under-fabric may be of cotton, linen, or hemp.

are made in both England and Scotland, and were first produced at the town of Axminster in Devonshire. They are usually woven in one piece.

Central Squares.—Brussels, Wilton, and tapestry carpets may be bought by the yard or in seamless woven squares. They are usually cheaper by the yard, but more is needed if the whole floor is to be covered; and if a central square is used, the appearance of those woven in one piece is far superior to that of a made-up carpet. The fashion of central squares, with a border of staining, parquetry, or matting, is of almost universal adoption now, and has many recommendations. If the rooms are carpeted all over, heavy furniture must stand on the carpet; and this favours an accumulation of dust very prejudicial to health. Also in the periodical sweepings the carpet gets imperceptibly dragged round heavy sideboards and bookshelves, and soon wears into holes. Some persons use brass

rings sewn on the edge and slipped over nails fastened in the floor to keep the central square in place, but as a rule the weight of tables and chairs is sufficient. People used to a room carpeted all over may complain at first of cold from the uncovered borders, but warm rugs at doors and windows stop all hurtful draughts, and the absence of the musty scent almost inevitable where every inch of floor is covered with carpet, excluding air and retaining flue, is very welcome.

Stair Carpets. — For carpeting the stairs, Axminster, Brussels, or tapestry carpet may be used; the purse of the housewife must determine which. If expense is not too great an object, a dark, rich-coloured Brussels of figured design—flowers are not suitable for stairs—may be chosen, and will give an aspect of luxurious comfort. But if the stairs have to bear the tramp of many feet, or a glare of strong sunlight from a landing window, lighter tones—drab or yellowish browns—had better be selected, as they will not show wear or fade quickly. The stair-carpeting may be protected by the use below of cedar-felt, procurable of a suitable width for two or three pence per yard; or it may be covered over with linoleum, care being taken to procure a flexible kind which bends easily over the edges of the steps. The carpet of the landing usually matches that of the stairs; but, if desired, cork carpeting may be substituted.

Kidderminster Carpets.—Kidderminster carpets are decidedly suited for bedrooms. The price of Brussels usually makes them prohibitive except downstairs, while the small patterns and quiet colourings of Kidderminster eminently adapt them for the upper part of the house. These carpets are composed entirely of worsted, and may be easily known from the circumstance that one side is the exact reverse of the other. For instance, if

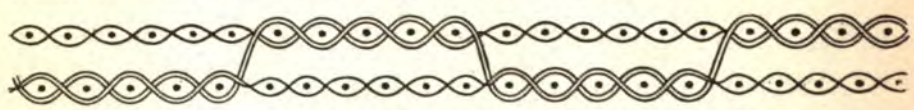


Fig. 28.—Section of Kidderminster, or Scotch, Carpet: two-ply. The dots represent the warp in each cloth; the lines are the strands of the two wefts, single and interwoven.

the upper surface has white diamonds on a blue ground, the under will have blue diamonds on a white ground. This makes them useful from an economical point of view; as, when one side of the carpet becomes soiled, it may be turned, and still present a neat appearance and the same blending of colours. They are sometimes called Scotch carpets, and the thickest kinds are known as two-ply and three-ply carpets. The ordinary kinds (fig. 28) consist of two separate cloths, each quite distinct from the other, but woven at the same time, and then interwoven. A three-ply carpet is composed of three such cloths. The tests of quality are the closeness and regularity of weaving; and though these carpets have not the woolly feel caused by the tiny loops in the Brussels, they should be soft to the touch.

Carpets under Beds.—Under the name of Cheviot and Shetland carpets many woven squares of Kidderminster are sold; the smallest size, 9 feet by 7, can be procured for one guinea. By the yard good

Kidderminster ranges from 2*s.* 6*d.* to 3*s.* 11*d.* The only objection to a woven square lies in the fact that part will probably have to go under the bed, and many housewives dislike this for sanitary reasons, and because of the wear to the carpet. But if the floor is stained all round, only a small square is needed, and it can easily be folded back for sweeping purposes.

Castor Grooves.—If wear from the weight of the bed on the carpet is feared, a plan lately seen in Brussels may be adopted. A metal grooving about an inch wide and perhaps a foot longer than the width of the bed is fastened on the carpet at head and foot. The bed-castors rest in these grooves, running easily along them. This prevents all scraping of the carpet, and the extra foot of the grooving allows the bed to be moved some space aside for either making it or sweeping under it.

Felt Carpets.—Felt carpeting is not so common now as formerly, and cannot be strongly recommended. As a bedside carpet it is soft and warm for bare feet to touch, but it is not durable. In its manufacture a mixture of hair and wool is employed. These are reduced to a soft pulp, and then by means of various machines are pressed together till the hooked fibres of the wool and hair interlace and combine. Heat and moisture, applied with further pressure, result in the production of a loose kind of cloth which is passed round a roller and rendered more compact. Hats are made of the finer, closer kinds of felt, table-cloths and carpets of the coarser. The latter are printed in colours by means of a roller cut and charged with colour. For table-cloths this process produces a sufficiently durable impression, but it is not adapted for hard wear. Under the tread of feet the pattern of a felt carpet soon disappears, and the soft loose material quickly chafes into holes. In plain colours felt has been used of late years as a bordering round carpet squares; it looks well for this purpose, and is warm; but the stained or parquetry borders have the advantage of superior cleanliness.

Dutch Carpets.—Dutch carpets are useful for servants' or back bedrooms. They are very strong, being made of dyed hemp, woven usually in strips or plaids.

Tests of Quality.—In choosing carpets of all makes great care should be paid to the closeness and firmness of the weaving. A Turkey carpet should be compact and full, with sufficient depth of wool in the tufts. In the Brussels and Wilton carpets the points to note are the length of the wool or pile, the number of threads to the inch, and the firm, compact weaving of the linen back which secures the tying in of the woollen, upper surface. A Brussels carpet should be bent back, so that the eye can run along the woollen ridges, and see if they are woven evenly. A Wilton carpet should be pressed between finger and thumb, and if the velvety surface retain no mark of the pressure, the pile is good and well made. In all woollen fabrics softness is a guarantee of good quality; any hardness betrays an admixture of cotton.

Under-coverings.—No modern housewife, of course, is guilty of the old

plan of putting one carpet on another to prevent wear. In former times instances have been known of three so piled—a nice harbour for dust, insects, and disease germs. If the floor of a room is uneven and knotty, and thus apt to wear the carpet, place underneath a layer of cedar felt, which may be bought at 6*d.* the yard of 60 inches wide, and gives off the aroma of cedar-wood, thus keeping away insects. A cheaper material for under-coverings, called felt paper, is sold at 2½*d.* per yard of 50 inches in width.

Floor-coverings for Halls.—Often the builder, by flooring the hall with tiles, saves the inmates of a house the trouble of considering how to cover it. This is decidedly the best and in the end most economical method. Indeed, if a tenant has a long lease, it might be wise for him to ask his landlord to put down tiles if they are not already there, or, should the landlord refuse, let him consider whether he will not bear the expense himself. Nothing gives the same handsome appearance as encaustic tiles, and they will last out many sets of linoleum or other covering. A weekly wash with soft soap and water keeps them clean and bright.

Should tiles be out of the question, other methods of covering the hall remain. Linoleum has long been a favourite material; it consists of a strong canvas back woven from jute, on which is spread a preparation of pounded cork mixed with linseed-oil. A somewhat similar material is known as kamptulicon, but it differs from linoleum in being prepared partly from liquid india-rubber. The old method of printing the pattern of linoleum on the surface, as in oil-cloth, was open to the objection that the pattern soon wore off and became shabby. A newer kind, called inlaid linoleum, is the best. In this the design is produced by means of variously-shaped moulds, into which the pounded cork and oil are run after being dyed. As the colour goes quite through it, no amount of wear can obliterate the pattern or alter the hues.

Linoleum should be laid down perfectly flat, as any unevenness or lumpiness causes it to wear quickly. Some authorities recommend that it should be cemented to the floor, the edges being nailed down with headless brads. Linoleum is a difficult material to cut, and should the housewife have to do this herself, a good plan is to take a pair of scissors, and with the closed points make a series of holes along the line where she wishes to divide it, and then with a knife cut from one perforation to another. Without this precaution the knife will slip on the thick surface, and the material will be cut unevenly.

A newer fabric, cork-carpeting, may also be strongly recommended for the hall. It is made from cork beaten out into a thick and even surface adapted for spreading upon floors. When first brought out several years ago it could only be procured in plain colours, which had the disadvantage of showing stains easily, but it may now be bought in various designs, the colours going all the way through, so that no amount of wear effaces them. It is warmer and drier than oil-cloth or linoleum, both of which are very cold to the feet. For halls, landings, kitchens, and nurseries, this cork-

carpeting is admirable, and though the price may seem high (estimates will be given later), it outwears cheaper fabrics.

Oil-cloth differs from linoleum in being thinner, and also in the materials of which it is composed. The foundation of oil-cloth is a strong canvas woven of flax and hemp combined. This canvas is tightly stretched in an upright frame, and covered on both sides with strong size, after which the cloth receives a rubbing all over with pumice-stone to make it smooth and even. Next a thick coat of paint is laid on, and spread with a trowel; and this is followed by several coats of thin paint on the upper side and one on the under. Between each coat the rubbing with pumice-stone is repeated. When the surface has been sufficiently smoothed, the cloth is printed with a pattern from wooden blocks charged with colour. Till the printed pattern has had time to dry thoroughly and harden, the floor-cloth should not be used, for the colours are liable to rub off. Both oil-cloth and linoleum are better for being well seasoned, and the prudent housewife, in purchasing them, will do well to ask for articles that have been some time in stock.

Either oil-cloth or linoleum may be used as a border in bedrooms, and is admirable for bath-rooms and in front of wash-stands, but such covering is too cold for an entire bedroom floor. For back passages either linoleum or cork carpeting is suitable.

Cocoa-nut Matting.—If, however, economy must be studied, cocoa-nut matting may be used for the back passages. Nature has provided the cocoa-nut with an outer husk of strong woody fibres. In the tropical climates where the fruit grows the natives have long manufactured these fibres into many articles for domestic use, but only within recent times has the material been much used in England. Yet it possesses many advantages, for it is warm and light, and does not harbour vermin. It may be had in its natural colour or variously dyed. A pretty crimson cocoa-nut matting forms an ideal covering—warm, dry, and cheerful—for a kitchen floor that has any tendency to dampness. Where this matter need not be considered, linoleum is perhaps preferable for kitchen use, owing to its light, bright, clean appearance. Also cooking operations are apt to bring grease-spots which can be easily wiped from the surface of linoleum, but are retained by cocoa-nut matting. Still, cocoa-nut matting has many advantages. The material must be looked for in some catalogues under the names "coir" and "sinnet", which are used to denote the fibres.

Staining.—Another way of covering the hall is to stain the floor at the side for perhaps a foot and a half from the wainscoat; and then, especially in the narrow halls of town houses, a strip of linoleum in the middle will suffice. This is a cheap plan, and also pretty. A clever housewife may easily do the staining herself. (The method is described under "Decoration of the House", pp. 82–85.) A border of plain brown always looks well, but anyone with taste can make stained work much prettier by following a pattern. The design chosen should be drawn on the boards, and then the various shades necessary for the pattern can be obtained by

diluting the oak-stain to different strengths. The size of the room should always be taken into account. A small pattern in a large space looks mean, while too large a device makes a small room appear smaller.

Druggets.—Where druggets are used, they are generally of felt, the manufacture of which has already been described. But, as has been previously stated, the laying of one carpet on the top of another is not particularly clean or healthy. If the heavy boots of the master of the house are found to leave too deep an impression on the dining-room carpet, place a little mat under the dining-table in front of his chair. Or if the children have the habit of scattering crumbs and pieces round them, let a linen crumb-cloth cover the centre of the carpet. Pretty light-looking crumb-cloths may be had at a moderate price, one 6 feet by 7½ feet only costing about 6*s.* 6*d.*

Mats.—As most mats and rugs are made of the same materials as carpets, they may be considered under the same heading. For the hall, cocoa-nut fibre mats will be found the best, except on the outside steps, where india-rubber mats are most appropriate. Of course the skins of wild animals—bear, tiger, wolf, and others—have a much handsomer look, but these are usually beyond the reach of modest purses. On the landing, either worsted-pile or small dyed sheepskin mats are appropriate; and the larger kinds of sheepskin mats, either bleached or dyed, are very nice for dining- or drawing-room. For the latter room Eastern rugs are used nowadays; in fact, a drawing-room, stained all over and partly covered with two or three rich-looking Persian or Indian rugs, presents a very handsome appearance. But a word of warning is necessary here. To meet the rage for all things Oriental, many worthless fabrics have been placed in the market. A short time ago a number of so-called Kurd rugs, made apparently of goats' hair, were seen everywhere. They proved most unsatisfactory in wear, soon becoming shabby. Let the purchaser remember the two tests are closeness and evenness in weaving. A slight irregularity in pattern or shape is of no consequence, as these rugs, being hand-made if genuine, do not present the same formal preciseness as machine-woven articles.

Cost.—It is difficult to give estimates of cost, as the size of rooms and style of floor-covering used affect this. Still, most people like to have an idea of probable expenses, and the following lists have therefore been drawn up. Several estimates for dining-rooms and drawing-rooms are given in order to suit various means. The rooms are supposed to be of the moderate size usual in towns.

HALL (18 feet by 12).

	£	*s.*	*d.*
India-rubber mat for steps	0	7	6
Large cocoa-nut mat for hall door	0	10	6
6 small cocoa-nut mats for other doors at 3*s.*	0	18	0
24 yards of linoleum at 3*s.* 6*d.* per square yard ...	4	4	0
Total	6	0	0

Cork carpeting at 3*s.* per square yard may be used instead of the linoleum.

STAIRS (15 steps, each measuring 15 inches).

A yard, to be used in turning the edges of steps, allowed over this length.

	£	s.	d.
7½ yards of Brussels carpet, 27 inches wide, at 3s. 9d. per yard	1	8	1½
7½ yards of under felt paper at 3d. per yard	0	1	10½
7½ yards of linoleum to cover, at 2s. 6d. per yard ...	0	18	9
14 brass rods at 6d. each	0	7	0
Total	2	15	9

DINING-ROOM (12 feet by 15).

First Estimate.

	£	s.	d.
Turkey square of 13½ by 11 feet. (No hearth-rug needed.)	8	6	0
Total	8	6	0

Second Estimate.

	£	s.	d.
28 yards of Brussels carpet all over, 27 inches wide, at 3s. 9d. per yard	5	5	0
Axminster hearth-rug	0	12	6
Total	5	17	6

DRAWING-ROOM (12 feet by 15 feet).

First Estimate.

	£	s.	d.
Seamless Axminster carpet to fit exactly	9	15	0
15 yards of under cedar-felt paper at 6½d. per yard ...	0	8	1½
Hearth-rug to match carpet	1	1	0
Total	11	4	1½

Second Estimate.

	£	s.	d.
Brussels central square, 9 feet by 12	5	15	6
Sheep-skin hearth-rug	1	1	0
Total	6	16	6

Or stain the floor all over, and use three Eastern rugs costing £1 1s. each.

LANDING (12 feet by 9).

	£	s.	d.
16 yards of Brussels carpet, 27 inches wide, at 3s. 9d. per yard	3	0	0
4 sheep-skin or worsted slip mats at 2s. 6d. each ...	0	10	0
Total	3	10	0

Other schemes are to use cork carpeting, 12 yards, costing 3s. per square yard, or £1, 16s. altogether; or to stain all over, and place an Eastern rug, price £1, 1s. in the centre.

GUEST BEDROOM (12 feet by 15).

	£	s.	d.
Tapestry square, 10 feet by 13	4	5	0
Hearth-rug	0	10	6
Wash-stand mat	0	2	6
Total	4	18	0

ORDINARY BEDROOM (12 feet by 15).

	£	s.	d.
Kidderminster square, 12 feet by 10½	3	6	6
Hearth-rug	0	5	9
Wash-stand mat	0	2	6
Total	3	14	9

SERVANT'S BEDROOM (9 feet by 12).

	£	s.	d.
All-over Dutch carpet, 12 yards, at 1*s.* per yard ...	0	12	0
Small sheep-skin mat	0	2	6
Total	0	14	6

BATH-ROOM (9 feet by 6).

	£	s.	d.
6 yards of inlaid linoleum at 3*s.* 6*d.* per yard	1	1	0

KITCHEN (12 feet by 15).

	£	s.	d.
20 yards of linoleum at 3*s.* 6*d.* per square yard ...	3	10	0

Or cocoa-nut matting of 30 yards at 1*s.* per yard, half a yard wide, £1, 10*s.*

THE HALL.

Though the hall should give the key-note to the house, it is very often neglected, all the artistic taste of the mistress being expended on the sitting-rooms. Truly, halls are difficult to decorate, as the builders of the present day seem to take no trouble about them, except in very large houses The usual type in a small villa is simply a long passage, often not more than six feet wide, with the staircase facing the front-door. This is more difficult to arrange than any other, as it persists in looking what it is, just a narrow passage.

A Passage Hall.—In general it may be said that the less furniture that is placed in the passage hall the better. A rather high dado about five feet deep, with a wooden shelf at the top, looks well. It can be made of anaglypta, painted ivory-white, the shelf-doors and woodwork being the same colour, and the wall above covered with plain paper of pale Indian-red, turquoise-blue, or faint melon-green. The floor should be covered with a linoleum representing black-and-white or gray-

and-white tiles, and a strip of plainly-coloured carpet should be laid down the centre. Supposing the paper to be pale-red, arrange some blue-and-white plates on the dado shelf, with one or two tall jars. On the wall

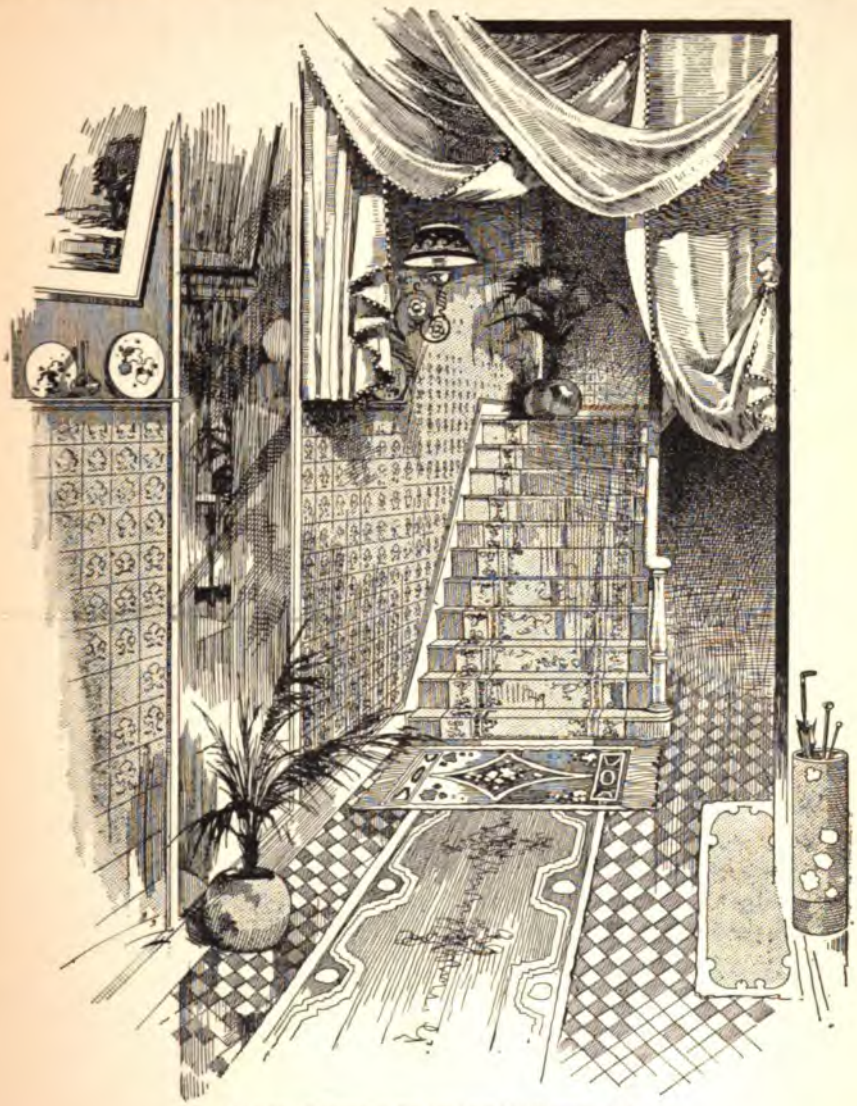


Fig. 29.—Suggestion for treatment of Passage Hall.

above the dado may be hung a few prints or engravings in narrow black frames; they need not be costly. Some of the illustrated Christmas numbers contain charming pictures in black-and-white which answer admirably for hall decoration. Paste them very smoothly on large pieces of cardboard, cutting off all the letterpress, and have them put in black frames. One good shilling number will supply enough pictures for a small hall.

Opposite the first sitting-room door, whether it be drawing-room or dining-room, a long panel of looking-glass should be fastened to the wall. It should be 6 feet in height, and the bottom should be within a foot of the floor. This glass ought to have a flat deal frame, painted white, with two square brackets on each side on which to put pots of ferns. Two very tall ferns in art pots should be placed on the floor in front of the glass. From the sitting-room this will almost give the effect of an opening into a conservatory, and so make the hall appear less flat and uninteresting. On one side between the two brackets a small hanging gong, or one of the quaint "cow-bells", may be suspended, a bracket-lamp, either of wrought-iron or copper, being placed opposite. A drain-pipe, enamelled turquoise-blue, by the drawing-room door, will serve for sticks and umbrellas; but an umbrella-ring, if preferred, is not more expensive.

This will complete the first part of the hall. Just beyond the mirror stretch a bamboo rod across within a few inches of the ceiling, and drape it with turquoise-blue furniture silk, edged all round with narrow ball fringe. Festoon it three times over the rod, keeping the folds in place with pins, and let the ends hang down on each side as far as the dado. A tall terra-cotta jar placed on each side of the shelf, and filled with ferns and foliage, adds greatly to the effect, standing out just in front of the blue drapery. The other part of the hall, by the side of the stairs, must be given up to a long row of pegs for the inevitable hats and coats, with a narrow bracket on one side on which to put such things as a salver, a brush, and a match-box. The kitchen door at the end should be concealed by a portière of white linen, worked with a bold design of conventional flowers. This scheme of decoration is made as light as possible, because with darker colouring the space would appear more contracted.

A Small Square Hall.—The next type of small hall is more artistic, but not much more spacious. It is just a square, with the staircase at the corner. The little passage leading to the kitchen beyond should contain a big cupboard to hold glass and china, because in a small house the lack of cupboard room is always a great drawback, and this seems to be the only place in which to put one which will in a measure do duty for a pantry. Some accommodation for hats and coats must be provided in the hall itself. First of all, cover the walls with a chintz paper in real old-fashioned colours on a white glazed ground, and have all the wood-work painted ivory white. Beneath the little slits of windows on each side of the front-door, place dwarf cupboards made of deal and stained to represent old oak. Though little more than lockers, they are most useful for storing all kinds of odds and ends, the tops serving as tables.

The one piece of furniture which can be placed in this hall must be of the "fitment" character (fig. 30). It can be made at home by anyone who has a little knowledge of carpentry, and some artistic taste as well. The materials required are a small wooden box or packing-case,—long and narrow, if possible,—some deal planking 10 inches wide, a piece of tapestry of a conventional design, such as *fleur-de-lys* on a string-coloured back-

ground, a dozen copper pegs, an antique copper lock, and some flat-headed copper nails. On the back of the box at the extreme corners screw in two uprights of the deal planking about 4 feet long, and nail a cross-piece joining them at the top, thus forming a square frame. The foundation of a fitment is now complete. It should be stained the colour of dark oak. When this is done, screw the copper lock on the box-seat, and hammer the pegs at regular intervals into the three sides of the frame above. The

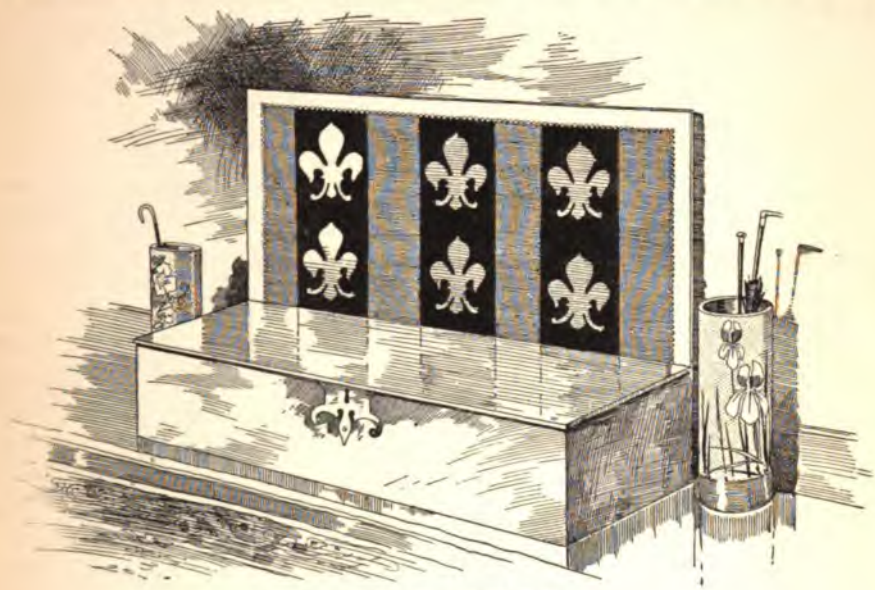


Fig. 30.—"Fitment" Seat for Hall.

panel of tapestry must then be attached to the frame by means of a row of the copper-headed nails, very thickly set. With an art-pottery umbrella-tube or a small stand, the hall furniture will be found all that is required.

An Old-fashioned Hall.—In some large, old-fashioned houses the halls are almost rooms. They are excellent for afternoon tea at all seasons, for in winter there is sure to be a fireplace in which the logs burn brightly, and throw a pretty glow over the walls and furniture, while in summer they make cool retreats, being usually dark and shady, wide-open doors allowing the air to pass through. An old hall looks best if it is panelled with oak. The panelling should reach the top of the doors, the selection of the wall-paper above depending upon whether it is desirable to give a dark or a light effect. In the former case there is nothing better than deep crimson, which can be relieved by some blue-and-white china, and by gleaming bits of antique copper ware; in the latter, a "peacock" paper with birds and flowers in old-world colouring on a pale-buff ground is the most suitable.

This hall, being used as a sitting-room, must on no account contain pegs and racks. Stands in the form of blue-and-white china jars can be placed

on each side of the hall door for umbrellas and sticks, but coats and hats should be relegated to a tall press of carved oak, which will cost about ten guineas. If more hanging accommodation is wanted, there is an excellent sort of corner cupboard which will fit into an angle of the wall. With a carved oak top and long curtains of plushette or serge in front, it costs only forty-eight shillings.

There are many articles of carved oak furniture (fig. 31) which would be quite in place in this hall, as a Welsh dresser, a dowry chest, a monk's

Fig. 31.



bench, a grandfather's clock, and so on. It is simply a question of money, but even if this is limited the chairs and tables must all be in keeping. Some quaint oak arm-chairs can be bought for 32*s.* 6*d.* each; and there should also be a Hamlet-seat, a tall settle by the side of the fireplace, a watchman's chair, and a courting-settle covered with old tapestry. The floor should be stained and polished all over, and a few rugs should be scattered about.

To relieve the flatness of the walls, an oak shelf about a foot broad should be fixed above each door. If economy is an object, it can be made of stained deal. It will hold jars, plates, and bowls; damaged pieces of china may be placed here, as they cannot be too closely inspected. If the doors are ugly they can be concealed by portières of tapestry or velvet, suspended from a rod just beneath the shelf, and partially drawn back.

The entrance to the kitchen premises, which is often very unsightly, can

best be concealed by a tall fourfold screen. A very charming one can be made by any one of artistic taste if canvas is stretched over the framework, well sized, and then given a coat of gold-paint. When this is quite dry a seascape or landscape should be painted on each panel very boldly, with shades of rich brown and orange. It will be a brilliant bit of colouring to relieve the sombre effect of the oak walls.

Extension of Halls.—A small hall can be enlarged in two ways, but neither is advisable unless the occupier owns the house, as both involve a somewhat expensive outlay. The first method, adaptable to almost any double-fronted house in the country, is to build out a large square porch or outer hall, removing the original hall door entirely, and draping the entrance with heavy curtains. It may be built of brick, with windows at each side, the walls colour-washed or panelled; or it may be of glass, taking the form of a conservatory entrance, which is always attractive if prettily arranged.

The other method can be employed if there is a small study or third reception-room on one side of the hall, the walls of which can be taken down, and the ceiling supported by strong iron girders. This gives a square space on one side, with the addition of a fireplace and a window. The walls should then be match-boarded from floor to ceiling and stained oak-colour, the floor being also stained and polished. Instead of ordinary pictures on these wooden walls, there should be tapestry panels in narrow black frames. These panels, mostly Dutch scenes, can be bought at various prices, beginning at 2*s.* each.

The recesses on each side of the fireplace should be filled in with book-shelves and cupboards coming quite flush with the mantel-piece, because in a real hall the chimney-piece is generally built so that there are no recesses. The hall itself, or the passage which was formerly called by that name, should have also match-boarded walls and polished floor to correspond with the addition. It may be found necessary to support the ceiling with an iron pillar, which can be utilized and made very artistic by fixing to it lamp or candle sconces, made of wrought-iron and copper, an oak table being built round it for books and papers. This must be specially made, but need not necessarily be a fixture, as it can consist of two semicircular tables, with a hollow in the centre to enclose the pillar.

The window requires careful treatment. The upper part should be filled with stained glass, if possible in some heraldic design of bright colouring, a thin brass rod being fixed below to hold two short full curtains of cream holland reaching only to the sill. These can be drawn together when wanted, so there is no need of a blind. If there is plenty of space, a pair of crimson-and-gold plushette curtains, long enough to reach the ground, should be hung from another pole fixed above the window. The furniture here should certainly be of old oak, and the rugs an arts-and-crafts design in pale-red on a blue ground.

SUGGESTIONS FOR HALLS.

1. **For a Long, Narrow Corridor Hall, with Wooden or Plaster Arch dividing Front and Back Sections.**—Dado of dull-blue cord matting. Paper above, in blue and amber shades on cream ground. All wood-work painted cream. Arch drapery of plain amber velvet or linen plush. Dark-red jars and bowls and brass plaques as ornaments. Brown cork-carpet or matting on floor. Or—

2. Turquoise-blue and white paper. White paint. Red matting on floor. Arch drapery of red velveteen plush. Or—

3. Dado of green-and-gold leather paper. Very pale-green paper or distemper above. Earth-brown paint. Curtains of printed velveteen, or silk-and-wool brocade, in browns, greens, and bright gold. Stained floor with Eastern rugs in the colours of which brown and gold predominate, with touches of bright red.

4. **For a Square Hall.**—Dado of wood panelling (oak or stained pine), 5 or 6 feet high. Paper above in rich tones of orange and green. Shelf at the top of dado with quaint pottery in brown, green, red, and orange shades, and copper plates and bowls. Window-curtains of orange silk. Square pile carpet in orange and brown in centre of polished floor. Or—

5. Panelling painted white. Tomato-red paper, plain or with formal and unobtrusive design, above. Jars and bowls of blue-gray Flanders ware on dado-shelf. Window-curtains of blue-gray linen, with *appliqué* of tomato-red linen. Square carpet, tomato-red.

6. **For Irregular-shaped Hall in a Modern House.**—Dado of gold-and-cream Japanese leather-paper or decorated lincrusta. Wall above painted or papered very dull gray-green. Framed panels of Japanese embroideries or sketches hung above dado, alternating with high triple-shelved bamboo brackets holding Japanese and Chinese pottery and bronze ornaments. All wood-work painted cream or a deeper green than the walls. Divan seats covered with plain gold-coloured velvet. Loose cushions in Japanese or Chinese embroidered cases—gold, deep-green, cream, or turquoise-blue. Cream-and-gold damask matting on floor.

STAIRCASES AND LANDINGS.

The staircase is a most important feature of a house, but, like the hall, it is too often neglected.

A Staircase Opposite the Front Door.—The worst form of staircase is one that is opposite the front door, and so close to it that a servant cannot politely admit visitors without either backing on to the stairs or screwing herself behind the door.

To put any furniture in this part of the hall would be impossible; it

can only be treated as an entrance lobby. From a pole across the ceiling curtains may be hung on each side, looped back very high up, thus forming a sort of archway at the beginning of the stairs. On the newel which ends the banisters there should be an art pot for a large fern, but as it cannot be safely placed without any fastening, three strips of "ribbon-iron" should be securely nailed underneath and then bent round and upward, each strip terminating in a scroll in order to form a socket for the pot or jar, which should be bright yellow, as this colour tones with any other. The higher and bigger the fern, the better is the effect. If there is only one flight of stairs curving round at the top, there is probably a small window just where the turn comes, and this wants drapery of some kind. A little brass rod across the top will hold a pair of curtains similar to those below, but if they come lower than the sill, they will be much in the way. They should have a border of deep ball fringe at the bottom, and hang quite loosely, so that they can be drawn together at night.

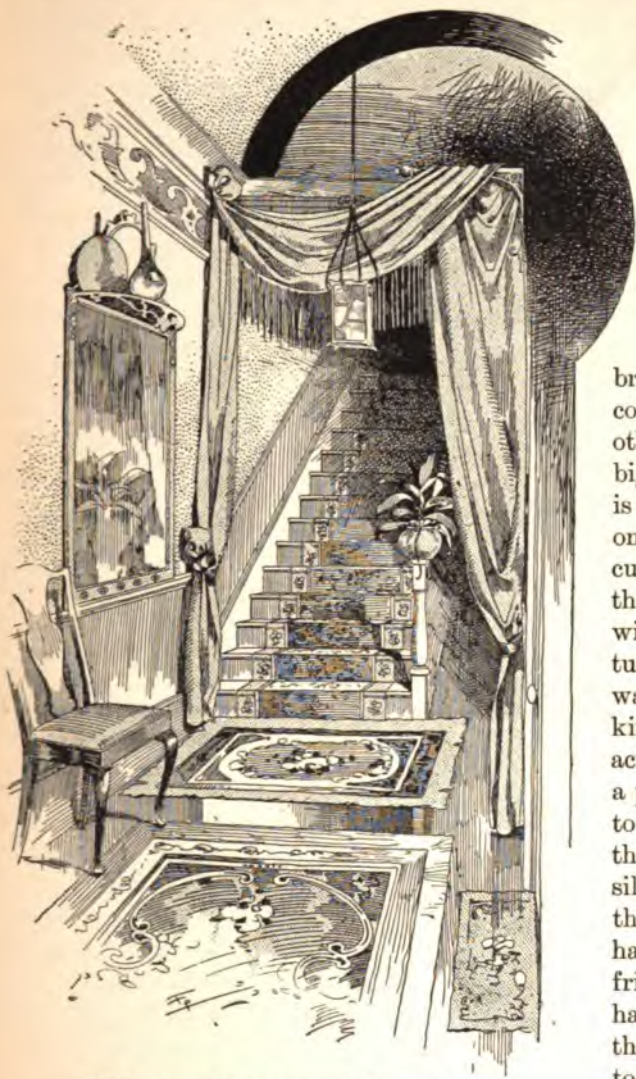


Fig. 32.—Suggestion for screening Hall from Staircase.

If this window looks on to a blank wall, or is under the surveillance of any other window, it must have a blind of some kind. If there is plenty of light, it may be covered half-way up with plain "cathedral glass", little squares of various colours with "lead" lines between. Those who dislike "shams" in any form will prefer a blind of thin Indian silk—red or yellow for choice—stretched on two thin rods, which run through two hems, the top one

having a small heading, and the bottom one having a piece about four inches deep below it to form a frill. If, however, the staircase is dark, two short blinds of creamy muslin are the best. They can be divided in the centre, bordered with tasselled fringe, and slightly draped back at each side.

A Small Landing.—In the case of a small landing, a dwarf cupboard, with graduated shelves for pottery above, may be placed against the wall between two of the bedroom doors. If the landing is dark, a mirror instead of the shelves should be fixed into a plain, flat frame of deal, stained the colour of dark oak, and the cupboard beneath should correspond. At the end of the landing there will be room for a small table, which may be bought in white wood for 2*s.* 6*d.* and stained oak. Above this a bracket-lamp can hang with iron and copper frame and coloured-glass globe, the price being about 10*s.* 6*d.*

A Darker Staircase and Landing.—A staircase that is not exactly opposite the hall door lends itself more readily to decoration. As it may, however, be rather dark, curtains at the entrance are not recommended; but a very good effect may be obtained by means of a Moorish arch (fig. 33), which can be purchased ready to put up for about 30*s.* A cheaper plan, which is nearly as effective, is to get a pair of arched fretwork brackets for about 10*s.* 6*d.*, and fix them on each side-wall, if the architecture of the house permits it.

If there are four flights of stairs, there will be a small square landing and a window at the top of the first and of the third flights. Here curtains and short blinds are necessary. On the first landing, a tall, red earthenware jar should be placed in one corner to hold bulrushes, teasels, and dried grasses; opposite this there is an ideal position for a grandfather's clock. Good specimens may occasionally be picked up in cottages at sales for £1 or so. If a clock is not available, its place may be taken either by five corner shelves of stained deal, one above the other, decorated with china jars and plates, or else by a square yellow art pot on a tall stand; the latter, in the country, can be filled with flowers and foliage. During the spring-time great bunches of golden marsh-marigolds form an admirable decoration; in the summer there is always a wealth of flowers; in the autumn there are brown leaves and great spikes of "red-hot-pokers"; and in winter the bowl can be filled with branches of Scotch fir or some evergreen shrub.

On the upper landing a long narrow ottoman may be placed just beneath the window, the wall on each side being filled in with book-shelves or narrow cupboards. Antique-looking cupboards may be made of stained deal, with anaglypta panels to represent carving.

A Broad Staircase and Landing.—A third style of staircase often found in a fair-sized London house is broad and lofty, with handsome banisters and three large landings. Such a staircase requires no decoration except a good carpet and some pictures. But the landings offer many opportunities. Although it is very difficult to keep plants healthy in town, there are some, such as aspidistras, which seem to be uninjured by gas and



STAIRCASE, No. 2 LINDFIELD GARDENS, HAMPSTEAD

ARCHITECTS: MESSRS. HOMER & RIDLER

smoke. The shape of the landing is usually square, a window taking up all the side which faces the stairs. Just above the sill there should be a shelf for ferns, and even a few flowers may be able to live here in the summer.



Fig. 33.—A Modern Moorish Staircase.

The landing must be quite Oriental—a bamboo archway at the entrance, with a drapery of printed cotton behind it, a low divan covered with a Dhjejun and having two or three big cushions at the back, an inlaid coffee-table, and a Moorish lamp. If the wall-paper does not quite agree with this scheme, it should be almost entirely concealed. To do this, have a high dado of cream-and-red matting fastened at the top with strips of split

bamboo, and above hang Kakimonos, Japanese masks, and quaint Oriental plates.

The second landing may be fitted with box ottomans to contain anything which cannot conveniently be put away in the various rooms. At the window there should be a pair of art-serge curtains reaching only to the sill. If the outlook is ugly, muslin blinds on brass rods can be added.

Stone Staircases.—Old farmhouses, which in these days are often modernized and converted into ordinary dwelling-houses, frequently have stone staircases with deep oriel windows, and a gallery at the top on to which the doors of the upper chambers open. Stone staircases are also found in many of the larger houses in Scotland. They are very troublesome to servants, as, being white, they show every mark. Very broad carpets will leave only a narrow margin to be kept white, but unless each stair is padded at the edge, the carpet soon wears through. Crimson seems to be the best colour here, where warmth of tone is so much required. The carpets should certainly be of this colour if handsome Turkey ones cannot be afforded. If the walls are also white, the window curtains should be of some crimson material. There are various fabrics which are appropriate, such as Florentine velours or art serge; but where the walls are papered, or, better still, oak-panelled, the curtains should be of tapestry, in the faded blue and brown shades which are found in the original material.

Beneath each window is usually a seat formed naturally by the thickness of the walls. It may be covered with a small cushion, of either tapestry or hand-embroidered serge. The gallery is seldom broad enough to accommodate much furniture, but space may be found for oak presses, cupboards, and tables, which, if not genuine antiques, may be excellent replicas of them. What is known as a "Cornish butter-press" would be quite in harmony with the surroundings, and also a Welsh dresser; either may be bought for about £8.

A Long Corridor.—In many old houses there are long, draughty corridors, with unexpected steps which are traps for the unwary. The longest and straightest of passages may be much improved by means of curtains, screens, seats, and chests. There should be rods across the ceiling at intervals, with broad curtains hung from each. Old-fashioned tapestry or monk's cloth worked with some conventional design will be most in keeping. Beneath the windows there can be low cupboards or bookcases of oak, the tops of which will be fitting places for old-fashioned bean-pots or bowls of flowers. A screen, the panels of which are covered with greenish-blue linen, with quaint designs in Bartolozzi red silks worked on it, would look well at the end of the corridor; or an old oak settle with a lamp, the exact copy of an old watchman's lantern, attached to the top. Old prints, tapestry panels, and needle-work pictures (the last may be worked at home, as there are plenty of patterns for the purpose) should be sought for as wall ornaments.

Square Half-landing.—Half-landings are found in many houses, and may be made very attractive. Their decoration should be quite distinct from

that of the rest of the staircase. If an Oriental style is desired (fig. 34), the landing should be divided from the stairs by a double Moorish arch, with a supporting column in the centre painted cream. Unpainted, this costs about 45s. A slight drapery of pale Indian-red silk should be festooned across the top at the back of the arch and allowed to hang down about midway



Fig. 34.—Suggestion for Decoration of Square Half-landing in Oriental Style.

on each side. The walls of the recess should have a dado of cream matting with a wooden moulding painted pale-red at the top, and above this a paper in light-red, blue, and burnished gold. The top part of the window should be arched in by means of fretwork corners, painted cream or of a very light copper "grille", and brackets can be fixed up each side to hold pots of trailing plants. If a low divan in front of the window were covered with dull-red linen plush, it would form a background for a pile of Oriental

cushions. The floor must be painted white, and a Persian prayer-mat laid down. An Algerian lamp and a Damascus coffee-stool will be in harmony.

If an early English method of decoration is preferred, a piece of oak-panelling might be fixed across the entrance to the landing in place of the Moorish arch, the centre panels being fitted with bull's-eye glass instead of wood, and from this a pair of old tapestry curtains could hang down on each side. There should be a high dado of brown monk's cloth, with oak shelf at the top on which to arrange some blue-and-white Delft plates, the wall above being painted dull-red. The window-curtains should be of Delft-blue linen, the "furniture" consisting of an oak "dowry-chest" or monk's bench, a "coffin-stool" with a plant in a Delft pot, and an oak "long-case" or "lantern" clock. The floor should be oak-stained, with a rug in red-and-blue.

Stair Carpets.—Among inexpensive stair carpets, the various kinds of Kalmuc are perhaps the best. For broad stairs where there is much traffic it is a good plan to put down a wide linoleum in some dark colouring with a narrow art carpet on the top. A good Brussels wears wonderfully well, and for those who are more luxurious there are the Axminster or Wilton pile carpets in rich Oriental colourings, which, with broad brass stair-rods, make a house look handsome at once.

When the staircase is dark, the treads of the stairs, and, if possible, the banister-rails should be painted white, the former being given a final coat of hard-wearing enamel.

Wall-papers for Staircases.—Wall-papers, like paint, should be light for gloomy places, and darker where there is plenty of sun. The most difficult staircase to decorate is one covered with the old-fashioned yellow-marbled paper. The only scheme which seems to improve this is to have prints or engravings with broad white margins, framed plainly in black, and some old blue-and-white plates and dishes artistically arranged in groups.

SUGGESTIONS FOR STAIRCASES.

1. **For a Dark Staircase.**—Wall-paper, a bold design in red on a white ground; frieze of plain red; paint, ivory-white; carpet and curtains, sapphire-blue.

Or, paper, blue-and-white chintz design; dado of plain blue paper with white moulding above; paint, white; curtains and carpet, deep gold.

2. **For a Light Staircase.**—Deep-blue wall-paper; dado of anaglypta painted dark-oak; paint, dark-oak; carpet and curtains, rich crimson.

Or, crimson wall-paper; anaglypta dado painted white; blue-and-white china on walls; oak paint; Oriental carpet; curtains of Old English tapestry.

3. **For a Light Staircase shaded by Stained-glass Windows.**—Pale-green paint for walls; dado of bronze and gold; Japanese leather-paper; oak paint; Indian-red carpet; green-and-red tapestry curtains.

4. For Staircase with Indian Ornaments.—Wall painted pale Indian-red, with frieze of turquoise-blue and white moulding between; white paint; Oriental carpet; Indian tapestry curtains; Moorish arches, if possible; hanging Algerian lamps on landings.

DINING-ROOM FURNITURE.

Some twenty years ago or more, when young people thought of starting a home of their own, the dining-room furniture was always a very heavy item in the list of expenses. It was almost invariably made of mahogany, very solid and very ugly, and the seats of the chairs were covered with real leather or perhaps with black horse-hair. The leather seats were buttoned down, and the crevices collected crumbs and dust which took the housemaid much time to extract, while the horse-hair certainly could not be recommended for either elegance or comfort.

The expensiveness of these suites and the trouble required to keep them polished induced some enterprising persons to introduce light oak, and this was certainly a step in the right direction. About the same period imitations began to be made, and quite a nice-looking suite of mahogany could thus be bought very cheaply; but, the mahogany being veneered and the seats made of American cloth, they looked shabby in a short time.

Oak Furniture for Dining-room.—All this is now changed, and small cheap suites of black oak with rush-seated chairs can be obtained which are fairly strong and artistic. Not that the oak is black with age; it is stained to the desired tint, but it is at any rate solid and not a miserable sham. The shapes are copied from genuine old furniture, although the carving is, it must be admitted, usually done by machinery. A nice little suite suitable for the small dining-room of a villa can be bought for £13, 3*s.* 6*d.*, surely a low enough sum; in fact, the whole room, with carpet, curtains, fender, fire-irons, and coal-vase, can be equipped for about £16. Crimson and blue are the best colours for black oak; therefore one should have a blue wall-paper and an art carpet and art-serge curtains of crimson. The expenditure may be estimated as follows:—

	£	*s.*	*d.*
Sideboard	5	5	0
Table...	2	18	6
2 Arm-chairs	2	7	0
4 Small chairs	2	18	0
Art carpet	1	0	0
Serge curtains	0	9	0
Fender, fire-irons, &c.	0	15	6
	£15	13	0

The few shillings left over to make up £16 might be spent upon some blue-and-white modern Delft-ware for the mantel-piece, which would just give the finishing touch required to make the room pretty.

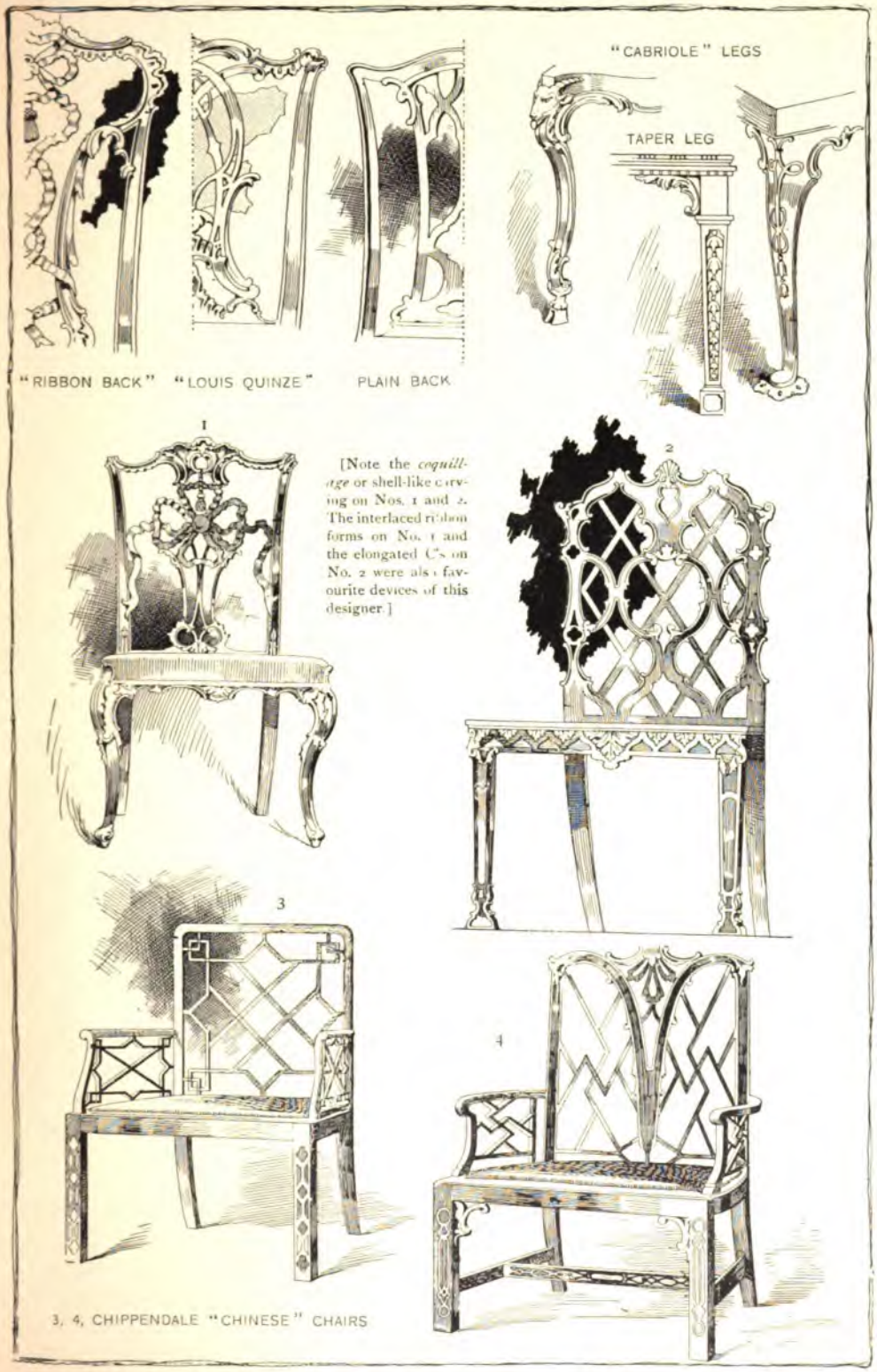
Starting from furniture as cheap as this, one may go up to almost any price in oak, especially when carved by hand. About £40 will purchase a beautiful suite for a moderate-sized room, the chairs being covered with either morocco, pig-skin, or velvet; and for £80, furniture in this style fit for the most sumptuous mansion can be obtained. Some of the sideboards or presses in these expensive suites have real old carved panels, mostly of "Teniers" design. They certainly require a great deal of care and trouble to keep them free from dust, but those persons who can afford such costly furniture can also afford an adequate staff of servants to keep it in order.

Where space is somewhat limited, a monk's bench, either in the window or used as a settle by the fireside, is a great convenience. The back turns over and forms a table, which is most useful at meal-times, and the under-part of the seat is really a box in which papers and books may be hidden away. Another convenience for a small room is a combination of side-board and book-case. The books are arranged on shelves in the lower part, while the upper is a cupboard with shelves, having a flap in front which can be let down to form a table. When made of black oak with old-style iron or copper fittings, it forms a handsome piece of furniture, and takes up very little space in a fireplace recess.

A dining-room furnished with carved oak seems hardly complete without a mantel-piece to match, and one with or without ornaments is often sold with the suite, the price varying according to the design. The overmantel is, as a rule, more in character if it has no mirror, a panel of either carved oak or repoussé in some bold, artistic design taking its place. Those who do not wish to remove an existing mantel-piece may hide it—if it is not too large, or too elaborately designed—with a movable lincrusta casing, which, when painted the colour of dark oak, the shelf being covered with a slip of gold or coppery-red velvet, looks very handsome.

If carved oak furniture is not liked, and it is certainly apt to be rough and difficult to keep clean if low-priced, a perfectly plain suite can be obtained for less than £20. This consists of half-a-dozen chairs with rush or tapestry-covered seats, a couple of arm-chairs to match, and a well-designed small sideboard with hinges and ring-handles of either copper or hammered iron. Plain oak is easily kept in order if thoroughly dusted every day and polished at regular intervals with bees'-wax and turpentine. Dining-room suites of oak or ash stained green have some artistic merit, and are well suited for use in country cottages, but they will probably be quite out of fashion a few years hence. They have the additional draw-back of looking well only with a very carefully-arranged decorative scheme, in which either blue of a certain tone, or yellow, is the key-note.

In many houses really good suites of light oak are still to be found, but there is nothing more difficult to treat successfully, according to modern ideas. It can only be done by a most judicious choice of colouring. A really striking dining-room, however, will result if the walls are coloured, painted, or papered pale-buff above a five-foot dado of brown-and-gold Japanese leather-paper, the curtains being made of snuff-brown velvet, and



CHARACTERISTIC CHIPPENDALE CHAIR-DESIGNS.

Thomas Chippendale flourished about 1750–1760. His "Design Book" was published in 1752.



the light oak chairs upholstered with brown morocco. Or the wall-paper may be sapphire-blue or water-cress green, in which case the chairs should be covered with good stamped velvet of the same shade.

Chippendale Dining-room Furniture.—The furniture designed by Chippendale is in great request for dining-rooms. It is strange that for many years his beautiful work almost disappeared, rare specimens being



Fig. 35.—Modern Dining-room furnished in old Chippendale.

seen only in cottages and old curiosity shops. The mahogany has always a rich tone not found in new wood, and careful polishing will restore all its colour and glow. The high backs of the chairs are often carved, and Chippendale's two favourite designs for chair ornamentation seem to be the "wheat-sheaf" and the "cockle-shell". The legs of the furniture are never turned as in modern furniture, but straight and square, or somewhat bending out, with what are called "cabriole" legs ending in rounded "club" feet. The cheapest and most suitable material for re-covering these chairs is an old tapestry design in faded tones of blues and browns, which can be bought for 7*s.* 6*d.* or 8*s.* the yard, 50 inches wide. Anything cheaper would be scarcely worthy of the charming old chairs. Arm-chairs of the same make

are not so easy to pick up, though what are called "head-and-foot" chairs with low backs are often to be found. A Chippendale sideboard is usually very expensive, and in any case it is often too heavy and bulky for a small room, for which a Sheraton sideboard (fig. 36) is more convenient. Not only is it lighter in style, but also it usually occupies less space than an ordinary Chippendale.

A room can be fairly well furnished in Chippendale style for about £25, not including the price of the Sheraton sideboard, which will be about £9 if it is modern. The cost of six Chippendale chairs covered with frieze

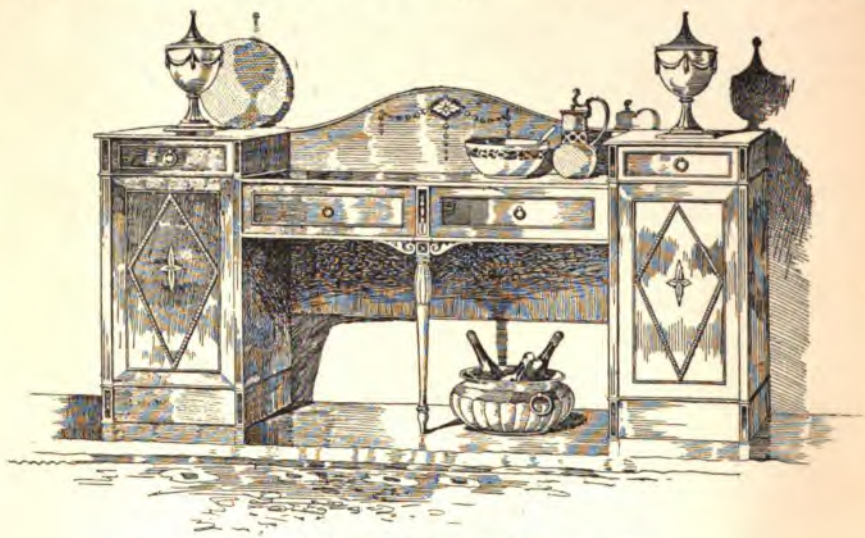


Fig. 36.—Design for Sideboard in Sheraton style.

velvet would be about 28*s.* 6*d.* each; of a grandfather's or Richelieu arm-chair, £3, 12*s.* 6*d.*; and of a table, 3 guineas.

The best background for such furniture is a wall-paper of a chintz or tapestry pattern, or, if the room is small, a plain geranium-red stripe with creamy-white paint looks well. A real old chintz design with a plain white ground gives an air of cheerfulness, but in that case curtains and carpet should be quite plain. The curtains should repeat one of the colours in the paper, either blue, red, or green, and a variety of these shades can be found in reversible damasks which do not require any lining, and are only about 3*s.* 9*d.* the yard, 50 inches wide. Art carpets are also made in plain colours without any pattern, but a pile carpet and plush or velvet curtains are of course preferable if their price is not an objection.

Dining-room Chairs.—The majority of modern dining-room chairs are fairly satisfactory copies of old ones of an era before the hideous "balloon-backs" and "buttoned-down" seats came into vogue, and as a rule are of good design, and comfortable as well. There is certainly nothing like leather for the covering of dining-room chairs, morocco, crocodile, or pig-skin being all admirable. Maroon leather, once so popular, is no longer

fashionable, fortunately—for the colour was ugly and inartistic, and harmonized with no other tint. Scarlet morocco brightens up a dark room agreeably, and looks particularly well with black oak, while for a very sunny room, a choice may be made between dull-blue, dark-green, and tan. Though some imitations of leather are fairly good, their wear cannot always be relied on; if the real thing proves too expensive it is best to fall back either on one of the numerous kinds of furniture-velvets, or on a good-quality tapestry, fastened on the chair-frames with small plain brass or copper-headed nails set as closely together as possible. If old-fashioned chairs with buttoned-down seats need re-covering, they should be padded up carefully to an even surface before the new material is stretched on.



Fig. 37.—Antique Dresser of Plain Oak.

Sideboards. — A collection of old china or pewter may be effectively displayed on one of the sideboards with high-shelved backs, which are copies of old dressers. Some are elaborately carved, others are plain, except for the narrow moulding along the edges of the shelves and the simple cornice. Care should be taken that these reproductions have the drawer-handles and keyhole-plates of antique design (if really old ones can be found so much the better), as the rather fanciful copper handles in vogue at present, though pretty enough in themselves, often suit these dressers very badly. A modern carved-oak dresser, 6 feet long, can be bought for ten or twelve guineas, but for a small dining-room furnished on quaint, old-fashioned lines, a smaller but really antique dresser of plain oak (fig. 37) would be more appropriate. It is not very difficult to obtain one at a moderate price—say £7 to £8. Some of the most charming of modern Chippendale sideboards are fitted with brass rails at the back for small silk curtains, and this affords an opportunity for a clever embroideress to display her skill. Many of the best designed modern oak sideboards have large plaques of copper embossed in high relief let into the backs;

others, more eccentric, have mottoes, proverbs, or quotations running along the top, the letters being either carved or cut out of copper, but these fantastic devices are apt to grow wearisome after their novelty wears off.

Dining-tables.—Round or oval tables are at present fashionable for use in small rooms, and copies of the old gate-tables in oak, plain or carved,

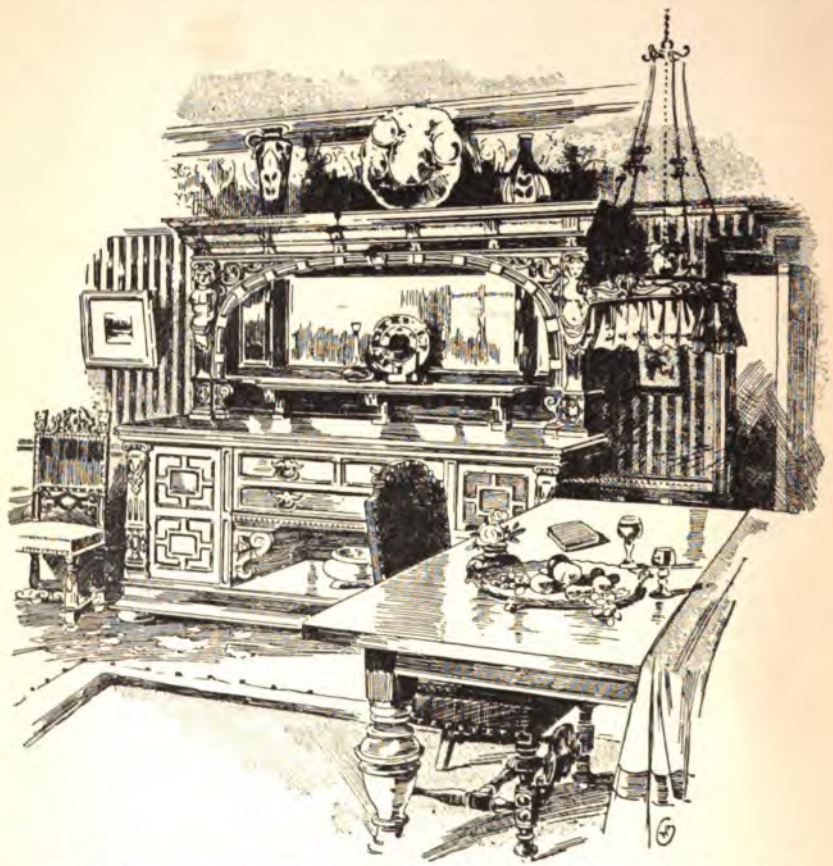


Fig. 38.—View of Dining-room (by Messrs. S. J. Waring & Sons, London, W.), showing Carved Oak Sideboard, 'Pull-out" Table, and Chairs. Elizabethan style.

are popular, their price ranging from £4, 4*s*. upwards. A good type of rectangular table (fig. 38) is a modification of a Jacobean design; the leaves are drawn out at the end instead of being inserted in the centre as in the ordinary telescopic dining-table. For small establishments where the members of the family have to wait on themselves more or less, it is not wise to choose a table so broad that plates or dishes cannot be easily handed across it.

Cheap Dining-room Schemes.—Some young folks who are about to furnish a home for their start in life, may say that all this furniture is beyond what their slender means can afford; they want a dining-room which will be cosy and substantial, but will not cost even as much as the

£16 mentioned in the first scheme. In that case they should not let themselves be tempted into buying cheap second-hand suites which are not likely to wear well. The following scheme will be found far preferable:—

For chairs, let them choose plain polished wood the colour of dark mahogany, a sort of improved "Windsor" with high backs and arms, sold at 10*s.* 6*d.* each. Six are quite sufficient for a small room, and a table with deal top and mahogany legs will cost £2 or less. The sideboard is always a difficulty when a dining-room has to be furnished for a very small sum, for there is practically nothing between one at £6 or £8 and the cheap chiffonnier, which is now rarely seen. On the whole, the best way of solving the problem is to fit one of the recesses usually found by the side of the fireplace with a low cupboard with shelves above, either painting the whole the same as the wood-work of the room, or staining it to match the furniture. The total cost, including copper ring-handles for the cupboard, need not exceed 35*s.*, which would bring the expenditure on the room up to £6, 18*s.* Another £2 would provide a square of art carpet, a pair of serge window-curtains edged with ball fringe, a fender, and a set of fire-irons. With a wall-paper in shades of soft blue, deeper blue paint, a blue-and-gold carpet and gold-serge curtains, the room, if plain, would not be commonplace.

The following is another simple scheme which is especially suitable for a dining-room in a country cottage. The walls should be hung with a paper in shades of blue and green, the wood-work painted green, and the floor covered with a square of dull-blue matting. The curtains may be of either blue serge, or blue-and-green tapestry. Six chairs with rush seats and frames of green-stained oak will cost 10*s.* 6*d.* each, and a couple of arm-chairs 15*s.* apiece, while the price of a table, similar to that suggested for the last scheme but with green-stained oak legs, will not exceed £2. A small deal dresser made by a jobbing carpenter would serve as a sideboard if stained to match the rest of the furniture and fitted with copper handles. This, as it need be nothing more than a narrow table on square legs with a drawer underneath and three enclosed shelves on the top, should not cost more than 35*s.* to 40*s.* complete. If there are some blue-and-white plates on the dresser and a blue-and-white china bowl filled with yellow flowers on the table, the effect will be very satisfactory.

Arrangement of the Dining-room.—In arranging dining-room furniture a stiff effect is not necessarily objectionable; indeed, although in drawing-rooms chairs, tables, and ottomans should be placed as informally as possible, the room in which we take our meals may be almost severe in its precision. In small houses the sideboard is often a difficulty. If fitted with glass it should be placed opposite the window, as in that position it lightens the room and seems to add to its size, but very often no space can be found for it unless it happens to be very small. In that case, if there are the dwarf cupboards in the fireplace recesses they will be found a great boon, as one may be used to supplement the sideboard cupboard and the other filled with books and papers. On the top of one (if not too high)

may be fixed a shelf to project 10 inches beyond the cupboard and form a writing-table, which may be covered with a cloth of art serge edged with ball fringe. Brass candlesticks and inkstand can be purchased for about 5*s*., and a home-made blotter will complete the arrangement.

SUGGESTIONS FOR DINING-ROOMS.

1. **With Brown Oak Furniture.**—Plain tan cartridge-paper, deep frieze of conventional poppies in red, tan, and brown. Oak-brown paint. Plain red linen-plush or velvet curtains. Red-and-brown carpet. Blue china bowls and plates on mantel-piece and shelf over door.

2. **With Oak or Mahogany Furniture.**—High dado of match-boarding stained green. Red paper above. Green-and-red printed velveteen curtains. Carpet with a good deal of red in it. Overmantel and mantel-piece stained green with red copper plaques let in.

3. **With Walnut or Mahogany Furniture.**—Dado of brown annas cloth. Paper in shades of rich full orange. Brown paint. Curtains of brown-and-orange damask, or brown serge embroidered in shades of orange mixed with copper-gold thread. Brown-and-orange pile carpet with surround of cream-and-orange matting.

4. **With Old Oak Furniture.**—Paper in shades of rather light red. Deep frieze of plain red cartridge-paper. Shelf frieze-rail with blue Delft plates and jars and old pewter platters formally arranged on it. All wood-work painted deep cream. Blue-and-white Dutch tiles in grate. Curtains of plain blue corded velveteen, or blue-and-red tapestry. Dull-blue cord-matting on the floor, with small Eastern carpet in blue, red, and deep-cream, in the centre.

5. **With Mahogany Furniture, Sheraton style.**—Paper with a foliage design in tones of light-green. Frieze of anaglypta, painted ivory. All wood-work painted two shades of green. Rose-red lustra tiles in grate. Curtains of tapestry or printed velveteen in greens with touches of rose-red. Brass palm-pots. Brussels or Axminster carpet in colours of curtains.

6. **With Walnut or Dark Oak Furniture.**—High dado of brown-and-gold leather-paper, plain turquoise-blue paper above. All wood-work stained walnut-brown. Deep gold serge or velvet curtains. Blue carpet.

DRAWING-ROOM FURNITURE.

In the drawing-room the housewife has the best opportunity of showing her taste and individuality. At the present time, when artistic and dainty furniture is produced in large quantities, it should prove comparatively easy to procure pretty surroundings at a moderate expense.

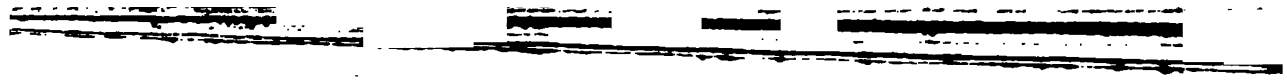
A drawing-room should especially give the idea of rest and comfort. Here the family gather for recreation after the duties of the day, and here





TWO VIEWS OF A DRAWING-ROOM IN LOUIS XVI. STYLE

BY MESSRS. H. & J. COOPER, LONDON, W.



visitors are received. Who does not know the quiet home, possessing a charm entirely of its own, where guests are cordially welcomed, and where graceful tact ensures more real enjoyment than is to be found in many more pretentious houses? Soft, carefully-blended colours charm the eye, crude discords are entirely absent, and the decoration of walls and floor makes a harmonious setting for the furniture, which has been selected for its genuine qualities and sound workmanship. Comfortable chairs and couches are cleverly arranged; and close at hand are convenient tables, bearing perhaps a bowl of flowers or a growing plant, together with an interesting book or magazine, yet leaving room for a tea-cup. Such pictures as adorn the walls are good and well chosen. A convenient screen shelters from draught, and if a footstool is desired, one will be found close at hand. Rooms such as these are indeed havens of rest. There are no traps set for the unwary in the shape of unsteady little tables, laden with valueless bric-a-brac; no meaningless draperies enshroud the furniture; everything is in order, and serves the double purpose of being both pleasant to look upon and in harmony with the surroundings. The passing craze of the day finds here no place. No particular fashion is followed; for that which possesses true beauty of form, combined with utility, can never be out of place or in bad taste.

Of course where means are ample, and designs and furniture of a special period can be indulged in, so much the better, but in such a case the designs should be chosen with a keen appreciation of their fitness to the room.

When it comes to deciding upon a definite scheme of decoration, there are several points which should be carefully considered. The aspect of the room is one; the furniture already possessed by the owner of the room is another. If there are many pictures, a plain, rather dull-hued wall will show them off to the best advantage; on the other hand, if the display of pictures is likely to be meagre, a paper that has a bold decided design in rich colouring will "furnish" the walls much more satisfactorily. Then, again, pictures in heavy old-fashioned gilt frames look best on dull-red walls, which also make the best background for blue Delft china, while both old prints in their narrow black frames, and modern autotypes and photogravures in broad flat oak or walnut, with inner gold mounts, are most satisfactorily shown off by a plain, low-toned paper. The style of the furniture should be considered; a light, rather frivolous type, for example, with many daintily ornamented little tables, spindle-legged chairs, and small brocade-covered settees, demanding a French style of paper, garlands, and Louis XVI. knots, in light delicate tints, which would be utterly inappropriate were the furniture of a more severe design.

Grained paint is happily out of fashion; so is that fantastic "picking out" in various gaudy tints, which was so dear to the decorator of thirty, and even twenty years ago. One plain tint—cream or ivory—is nearly always a safe choice, and is all but invariably used for the whole of the woodwork, although, if the latter is of new and good quality, it may be stained oak or walnut. Enamel gives a smoother surface and wears better than ordinary

paint, but is proportionately more expensive. However, as it is only necessary to use enamel for the final coat, the extra cost need not be very great.

Any structural peculiarities should be taken advantage of as far as possible, and recesses of peculiar-shaped windows should always be carefully treated and their good points emphasized. The little conservatory that so often leads out of a town drawing-room may be instanced as a feature which can frequently be made quite attractive instead of ugly, if dealt with judiciously.

A Striking Drawing-room.—If a striking and original colour scheme is liked, the following will be found effective. All the wood-work is to be painted ivory-white, and the ceiling distempered a warm shade of cream. The wide frieze should be either of dull-green and ivory leather-paper, or of anaglypta painted dull-green and "wiped" to show the cream ground in the raised parts, or of ordinary paper with a leaf design in green or ivory, the paper covering the body of the wall having a graceful design of tangled Shirley poppies in shades of tawny terra-cotta. The mantelpiece, well provided with shelves for china, ought also to be painted ivory; and the grate should be framed in two rows of plain tiles, the inner bright-yellow, the outer green. If this is considered too daring an arrangement, the tiles may have a design in relief, in shades of yellow and green softly blended. The square carpet should be patterned in tones of creamy-brown and terra-cotta, with a broad margin of green-stained boards round it. Autotypes in frames of green-stained oak, and some pieces of greeny-yellow Della-Robbia pottery, will accord pleasantly with the general scheme.

When there are many old prints or engravings, a suitable decoration can be carried out by using a plain cartridge-paper of a soft, dull, but not dark tone of blue for the walls, and nut-brown paint for the wood-work, touches of deep orange being introduced amid the subdued browns and blues of carpets and hangings.

An Old-fashioned Drawing-room.—If the room to be treated is of the low, deep-windowed type to be found in old-fashioned houses, and if its owner has a nice collection of water-colour sketches, together with an assortment of Dresden china and silver *bibelots*, in dainty French cabinets of inlaid mahogany, the ceiling should be either coloured a warm cream verging on buff, or panelled with one of the numerous high-relief papers, and painted the same tint, the walls being hung with a paper that has a graceful design of dull-pink roses and green foliage tied with love-knots of old blue on a satin-striped background of pinky-fawn. The frieze should have a pattern of tangled roses, shading from deep rose to palest pink, and the rail dividing it from the paper below should, together with the rest of the wood-work, be painted warm cream-white. For a floor-covering nothing will be so desirable as an Axminster square that has a bold design in shades of brown and dull rose on a creamy ground.

Some of the chairs, among which ought certainly to be included one of the winged type sometimes known as "headache" or "grandfather's" chairs, should be well-padded and upholstered with a striped tapestry of French

design in pale-brown, cream, and pink, with dashes of blue; while others less luxurious might have mahogany frames—if slightly inlaid, so much the better—and seats covered with green velvet. A settee matching the last, a couple of pretty silver-tables, with cabriole legs perhaps, and a long, low



Fig. 39.—Corner in an Old-fashioned Drawing-room.

Empire mirror to hang above the mantel-shelf, should be added to the furniture. Cushions and candle-shades of pure yellow will give a final touch of distinction to the room.

An Inexpensive Drawing-room.—The following scheme is suitable for a drawing-room on which a large sum cannot be spent:—The wood-work to be painted earth-brown, a daisy-patterned ceiling-paper, and the walls

hung with a paper having a design of yellow daffodils conventionally treated on an ivory ground. If economy has to be very strictly considered, an art carpet in shades of nut-brown and soft turquoise-blue may be chosen, the cost of one measuring 9 or 10 feet square, or rather less, being about £2, 8*s*. 0*d*. Such a thin kind of floor-covering, however, is scarcely suitable



Fig. 40.—Corner in a simply-furnished Drawing-room.

for a drawing-room, and a square of Brussels carpet in the same colouring would be a better investment. Its price would be about £5. For the thick curtains, golden-brown serge edged with a tufted binding, and brightened with dado of brown-and-blue tapestry, or with broad bands of printed velveteen top and bottom, would be satisfactory. Their cost, if made at home, need not exceed 30*s*. to 35*s*.; while a pair of Madras muslin inner curtains, tasselled or fringed at the edges, can be bought for 12*s*.

As to the furniture, a sofa and book-case should be found in every drawing-room; and a small Chesterfield couch, neatly upholstered in a pretty

blue-and-gold cretonne, can be obtained for 5 guineas; a settee, less cosy, but also less cumbrous, with walnut or mahogany frame, and cretonne-covered mattress and cushions, costs rather less. The book-case may be an arrangement made to fit into one of the fireplace recesses, with plain shelves for books at the bottom, and nooks for bits of artistic pottery above; or a revolving book-stand in walnut might be substituted if more suitable for the room. In white wood the recess arrangement would probably cost about 3 guineas, and the price of a revolving stand would be nearly the same. Of writing-tables there is a large choice, from the pretty if fragile thing of bamboo and lacquer to the slightly more solid but very dainty screen writing-desk with its high, silk-curtained back, and many little pigeon-holes and compartments for stationery. More useful than either, however, yet not unpleasing in appearance, is a plain walnut or mahogany table, with either three or five drawers with brass drop handles, and a top covered with golden-brown leather. This can be obtained for £3, 3*s*. Two other tables will be wanted, one with square or oblong top and a shelf underneath; the other a bamboo-and-matting table for tea. Then, with a couple of comfortable, well-stuffed chairs covered with cretonne to match the couch; two more with plain walnut or mahogany-stained frames and fancy rush seats; another pair of arm-chairs in the same style, and one basket-chair, the room, if of moderate size, will be fairly well furnished. A fourfold Japanese screen may be added, and a palm-stand seems to be indispensable in a modern drawing-room.

The exact cost of the furniture works out as follows:—

	£	*s*.	*d*.
Carpet	5	0	0
Sofa	5	5	0
Writing-table	3	0	0
Double-shelved table	2	5	0
Book-case	3	3	0
Tea-table	0	10	6
2 Small chairs at 7*s*. 6*d*.	0	15	0
2 Arm-chairs at 21*s*.	2	2	0
2 Upholstered easy-chairs at 45*s*. ...	4	10	0
1 Basket-chair	0	18	6
Screen	1	15	0
Palm-stand	0	10	0
Overmantel	1	10	0
Curtains (thick)	1	15	0
Curtains (thin)	0	12	0
Fender and fire-irons	1	10	0
	35	1	0

If the total amount to be spent on the room is £40, there will be a balance remaining of nearly £5, out of which cushions and mantel-slip can be provided, as well as more essential, if less decorative, articles, such as curtain-rods and a coal-scuttle. The cost of ornaments and pictures is

A Chippendale Drawing-room.—The following scheme, slightly more expensive than the last, is suitable for a fairly large drawing-room. All the woodwork is to be painted white, the walls papered with a plain pale-green paper and a paper with a conventional pattern design, a frieze of flowery poppies, white, pale-pink and green, and a paper with a small design of foliage in shades of green as an ivory ground. If possible, the carpet should be a Wilton square in shades of green and pink, but if the size does not permit of this, a good-looking green-and-white floral matting, with two or three soft-pink rugs, could be substituted for it. The door curtains may be either of green-and-pink tapestry or of figured velvet and these will be found the most effective, while for inner curtains those of simple Madras muslin at 1s. a pair cannot be improved on. The furniture should be chiefly modern reproductions of Chippendale's work, with perhaps an old piece judiciously introduced here and there. If by good fortune it can be picked up cheaply at a sale-room or a dealer's shop, a small table (which makes a fair card table when closed), a roomy cabinet, four plain upholstered or pale green figured velvet easy-chairs, and a high-backed settee would be required to match, would be wanted. In addition, there should be purchased a long narrow table in red mahogany, to correspond with the rest of the furniture, a little folding Sutherland tea-table, a small writing-bureau, a screen, and a palm-stand. The most suitable screen for this style of room would be one with panels of green-and-pink brocade in a mahogany frame, but a cheaper substitute might be found in one of white wood stained mahogany, with panels of plain pale-green Pongee arranged in three flutings. The ordinary type of palm-stand is apt to be incongruous in a room furnished in the way suggested, and a really appropriate one of mahogany with gilt ornamentations is rather expensive, costing from 10s. to 40s.



DRAWING-ROOM — BY MESSRS. LIBERTY & CO., LIMITED, LONDON, W.



DINING-ROOM — BY MESSRS. LIBERTY & CO., LIMITED, LONDON, W.



The cost of such a drawing-room would be about £60:—

	£	s.	d.
Carpet	10	0	0
Thick curtains	2	0	0
Thin curtains	0	12	0
Card-table	2	10	0
Cabinet	7	10	0
4 Chairs at 25*s.*	5	0	0
Sofa	7	10	0
2 Easy-chairs at 63*s.*	6	6	0
Long table	1	10	0
Sutherland-table (second-hand)	2	2	0
Writing-bureau and book-case	8	8	0
Screen	2	5	0
Palm-stand	1	5	0
Fender and fire-irons	3	3	0
	60	1	0

If matting and rugs were chosen instead of the carpet, the cost of floor-covering would be reduced by one-half, while a mahogany writing-table at £4, 14*s.* 6*d.* might replace the combined writing-bureau and book-case if further economy were necessary.

A Well-lighted Drawing-room.—For a room that is well-lighted but not sunny, a judicious arrangement of colour, embracing plenty of red, is required. The walls should be covered with a plain red paper, with a frieze of pomegranate design in brighter red and full cream; all paint should be a full warm cream colour, and the ceiling-paper daisy-patterned in pale-yellow on a cream ground. If there is a recess near the fire, a cosy corner could be arranged in it, with a shelf fixed at a convenient height to hold specimens of quaint blue pottery. This cosy corner would look well upholstered with printed velveteen, and a judicious mixture of cream and red, the loose cushions being covered with plain red silk. For thick curtains nothing could be better than cream-coloured linen embroidered with a wide border of old English flowers, having the same blossoms arranged in a conventional manner at the foot of the curtains to simulate a dado. The thin curtains might be made of soft cream net with frills of the same material, or of silk-finished cream muslin similarly edged. The space above the chimney-piece could be appropriately filled with either an oil-painting or an autotype of a good picture in a wide frame of carved oak, or with a narrow mirror mounted in the same way, and flanked by plaques of beaten copper and old Delft plates on oak shelves. High-backed carved oak chairs upholstered with red-and-cream damask cost £2 each, and a corner chair cushioned to match may be bought for 10*s.* A small square oak table costs 22*s.* 6*d.*, and a larger one of octagon shape with book-shelf under the top £4, 12*s.* 6*d.*, while the price of a damask-covered settee is about £8, 8*s.*, and of a square stool to hold a palm 6*s.* 6*d.* A delightful bureau can be purchased for £7, 7*s.*, and if it is not wanted to serve



Fig. 41

as an escritoire, the front flap can be replaced by glass, thus providing an uncommon show-case for *bric-à-brac*.

An Axminster carpet (about 18 feet by 12) would cost £12; it should have a pattern in shades of red and touches of old blue on a deep cream ground. All china ornaments and flower-vases should be blue Delft, royal-blue Worcester, or pure white. In the way of finishing touches may be added a high old-fashioned fender of pierced brass, quaint fire-irons and helmet-scuttle, and brass pots for the palms and ferns.

The total cost is appended:—

	£	s.	d.
Carved oak mirror	3	18	6
4 Chairs	8	0	0
Corner chair	2	10	0
Small table	1	2	6
Octagon table	4	12	6
Settee	8	8	0
Stool	0	6	6
Bureau	7	7	0
Carpet	12	0	0
Fender, fire-irons, scuttle	5	0	0
	53	5	0

Drawing-room Papers.—The modern plan of papering the ceiling has much to recommend it, and is certainly a decided improvement on the commonplace whitewash. When papering is not considered desirable, the next best thing is to tint the ceiling to accord with the decoration of the room, pale-green, buff, or, when suitable, green, or faint rose. In wall-papers a stiff obtrusive pattern should be avoided, the object being to make the walls a harmonious background for the furniture. A paper which is so bold in design and colouring as to form the dominant note in a room, is inartistic. Patterns should be obtained from a firm in a large way of business, having a good reputation for fair dealing, and competent to give advice on colour and style. There is, however, no need to discuss the subject here, as it has a separate section to itself.

Drawing-room Carpet.—Of carpets there is an infinite variety obtainable at all prices. Where expense has to be seriously considered, an art carpet is unobjectionable if chosen judiciously, but a Brussels, if more costly at first, lasts a lifetime with fair wear. Persons with well-filled purses can select from the many sorts of pile carpets—Wilton, Axminster, Persian, Turkish, and Indian. Certain manufacturers supply carpets to match the wall-paper. The plan has its advantages, but when it is adopted, the hangings and chair-covers should be of plain unpatterned material, or the effect will be unduly monotonous. Mattings of all kinds, Japanese, Indian, Chinese, and the artistic-hued English rush mattings make admirable backgrounds for rugs, and are particularly nice in the summer. They wear well, and may be recommended for use in rooms that lead to the garden where there is much traffic.

A new cord carpet, procurable in plain colours, is also of service as a background for rugs and skins. It is very inexpensive and fairly strong. Felt should be avoided, for it shows every speck and mark, wears badly, and is never really satisfactory. For further information see "Floor-Coverings".

Blinds.—The most suitable blinds are those of cream-coloured linen, plain or damasked, with insertion and border of thick lace, which are best known under the name of Duchesse blinds. They should be mounted on English spring rollers if possible, but the cheaper American rollers act very well except in cases where the window runs right down to the ground. Festoon blinds should never be chosen, as they are simply dust traps. Venetian blinds admit air and light, and can be regulated at will, but they cannot be considered artistic. Thin curtains made of batiste, or tussore, taffeta, or coloured linen run on slender brass rods fixed at the top and bottom of the windows, and capable of meeting in the centre, find favour in some quarters, but unless carefully arranged they are apt to look untidy, and do not give to a house the same trim appearance as ordinary blinds, nor are they so entirely satisfactory as shades. Outside blinds of green rush are useful for sunny rooms; they are not so general in England as they deserve to be. (See also "Blinds".)

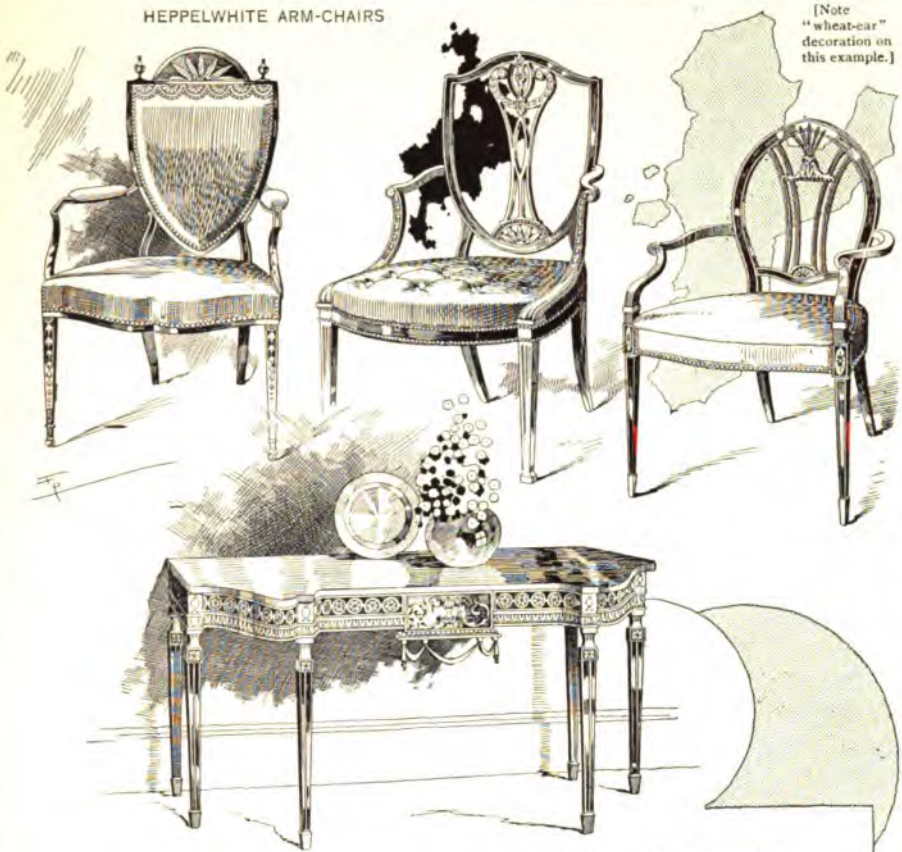
Drawing-room Curtains.—The old heavy cornice, and solid pole, either gilt or wooden, with carved ends, is happily a thing of the past. Slender brass rods with simple ends are almost universally used, unless something still cheaper is required, when bamboo poles may be substituted. Curtain-rings, however, do not run freely on bamboo.

In choosing curtains it is well to remember that bright colours look less bright and dark ones darker when hung. Care must be exercised with regard to blue or green, as some of the darker shades of these colours become almost black under artificial light. Curtains should hang in soft rich folds; anything stiff should be avoided. There is infinite choice of material—linen-plush, velvet, art serge, tapestry, and velours, to name but a few. Curtains of self-coloured linen may be embroidered with either silk or flax thread, a good example being pale-buff linen with a border and dado of English flowers, worked in natural colours, the body of the curtain powdered with small sprigs, and the lining of soft pale-yellow silk. A charming portière may be made of golden-brown silk sheeting, with a bold design of gladioli, in shades of pink, rose, and cardinal, and the foliage in its natural grayish-green tint. Soft Madras muslin, in plain cream or ivory, is perhaps the best of all materials for summer curtains. Silk, silk-canvas, and the new lappet net with sprigs in tambour style, are all very dainty, especially for small windows, while guipure vitrage always looks nice, and wears well, even if it is a trifle suburban. (See also "Curtains and Draperies".)

Drawing-room Chairs.—Small easy-chairs upholstered in tapestry or printed velvet and supplied with easily-running castors should be found in every drawing-room that makes any pretence of being really comfortable.

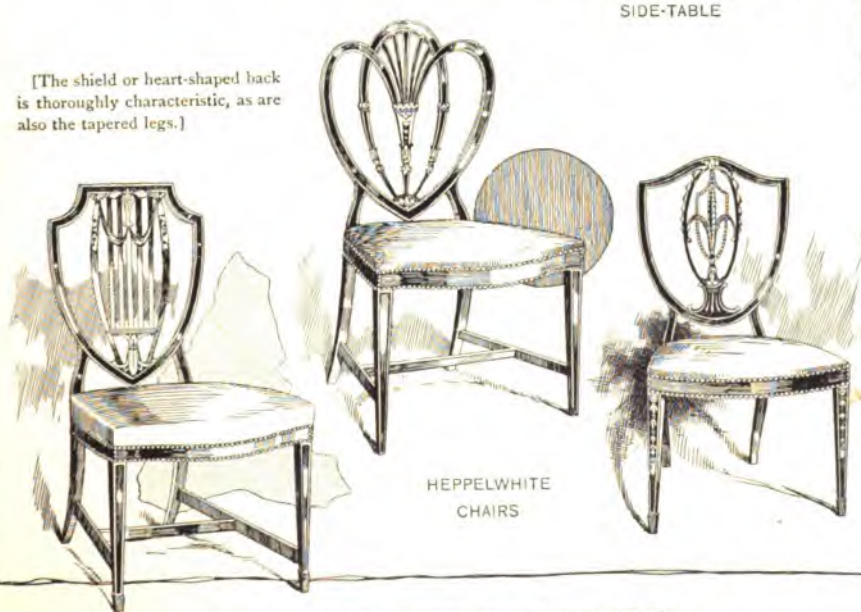
HEPPELWHITE ARM-CHAIRS

[Note "wheat-ear" decoration on this example.]



HEPPELWHITE SIDEBOARD OR SIDE-TABLE

[The shield or heart-shaped back is thoroughly characteristic, as are also the tapered legs.]



HEPPELWHITE CHAIRS

CHARACTERISTIC HEPPELWHITE FURNITURE.

Messrs. A. Heppelwhite & Co., Chippendale's successors, published their "Design Book" in 1789. The Heppelwhites were designers rather than manufacturers.

The shapes should be carefully chosen (see fig. 42). A chair, somewhat after the style of a nursing-chair, with the front legs slightly longer than the back ones, is very comfortable. It may have either a walnut or an ebonized frame, and a fancy seat of green, or red-and-white straw, and should be provided with a small thin cushion, fastened to the top-rail to serve the purpose of a rest. Corner-chairs make a pleasant variety, and may be obtained with plain or fancy rush-seats and ball-frames stained or enamelled any suitable colour. Another variety of the same shape is made of red Chippendale mahogany, with seat of *frisé* velvet, secured by closely-

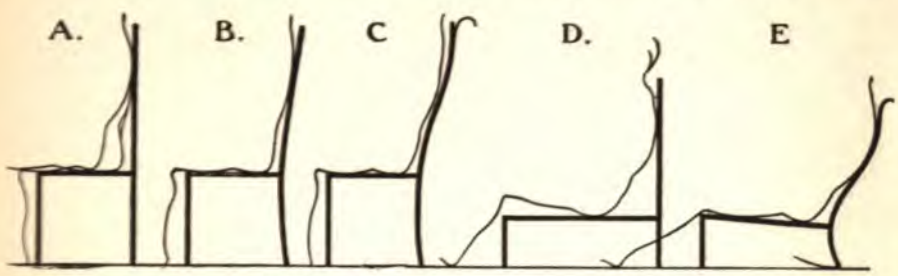


Fig. 42.—Diagram showing principles of comfort and discomfort in chair-designing.
By Edwin Foley (Society of Designers).

For comfort, the form of the chair-back should be adapted to the curve of the back-bone, as in C and E. In the latter, the slope of the seat makes still further for ease. The discomfort of A and D (which have upright backs) and, in a lesser degree, B, is evident from the diagram.

set brass or copper-headed nails. Modern Chippendale chairs of ordinary shape, made of rosewood or mahogany, inlaid with satin-wood, and upholstered with suitable brocade or tapestry, are always in good taste, but they do not accord quite satisfactorily with furniture of any other style. Black-railed chairs of English make can be obtained in various simple designs with either straw or cane seats. They have the advantage of being strong, inoffensive in style, and inexpensive; they are also light, and easy to move.

Rocking-chairs are not so generally appreciated in this country as they deserve to be, but a new and rather popular model is fitted on castors, the upper portion being mounted on miniature rockers. This type of chair is not precisely beautiful, but it looks its best when it has a frame of polished wood, and is upholstered with Utrecht velvet or a good linen-plush, and finished with a close-set row of copper nails.

Tea-tables.—As to tea-tables, the ever-popular bamboo with its two or four flaps is the best among the cheapest class, and may be obtained with its top lacquered or covered with matting, cream, dull-red, or green, the last being perhaps the most uncommon. Folding wooden stands, plain or ornamented with Cairene carving, to hold brass or copper trays, are convenient, and look particularly well in rooms decorated in an oriental style. Oblong trays of mahogany or oak with handles at each end made to drop on low stands, have something of novelty about them, and the small square or oblong tea-tables with tops inlaid with lustra or plain-coloured tiles require no cloth, and are decidedly pretty.

Drawing-room Cabinets.—A useful type of cabinet for a drawing-room that is not merely a *salon* in which to receive visitors, but also a living-room, is one with side-recesses for books, a secretaire with lock-up flap in the centre, and a glazed cupboard for china above (fig. 43). Corner-cabinets in mahogany, with lattice-paned doors, are also admirable for the display of china, while in rooms furnished in certain styles black Chinese cabinets have an excellent appearance. Bits of old silver and valuable miniatures are best shown in glass-topped silver-tables, the prettiest of which are of satin-wood painted in the Vernis Martin style (fig. 43), or of inlaid mahogany. These tables should always be fitted with good locks, but it is really best to have the glazed top made as a movable case, so that it may be lifted off and put into a place of security at night.



Fig. 43.—Cabinet with Secretaire; Satin-wood Table, with removable glass top.

Overmantels.—The choice of an overmantel must, of course, be influenced to a great extent by the general style of the furniture. A tall, rather narrow, antique mirror in a wide, flat, mahogany frame with gilt ornamentation, goes best with plain Chippendale furniture; but if the latter is fanciful in design and elaborate, a much more appropriate overmantel would be one that has three oval mirrors set in a framing of festooned garlands of flowers either of carved wood or "compo" painted white, with or without gold picking-out. Simpler overmantels have arrangements of shelves, backed with Japanese leather-paper, surrounding an autotype or mirror in a wide, flat, oak frame, or the centre panel may be filled with plush or velvet to form a background for miniatures.

A good way of exhibiting a quantity of china to advantage is to arrange it on a series of shelves fixed right across the chimney-breast and backed with either dark velvet or leather-paper, the shelves extending from the mantel-piece to within 24 inches of the ceiling. Long narrow panels of embroidery, old or modern, can often be successfully mounted as an over-

mantel; for instance, a pair might be fixed on either side of a narrow mirror, and the whole inclosed in a reeded or plain moulding, or a single panel of needlework could be used to form a centre, flanked either by tiers of shelves for *bric-à-brac*, or by a flat, broad framing of carved wood.

Pianos.—When means permit, and the room is a large one, a grand piano is, of course, a more desirable possession than the cottage or up-



Fig. 44.—Piano with raised Shelf for Ornaments, and Rail for Drapery.

right-grand, but it is with one of the latter that most people have to be content. The general outline of the cottage piano can never be æsthetically beautiful, but much has been done of late years to improve its appearance by tasteful decoration. Mahogany cases inlaid with satin-wood are often exceedingly pretty, and so are those of dark, dull-polished rose-wood, with front panels that have a raised Japanese design worked out in ivory and mother-of-pearl Oak-cased pianos are occasionally seen, but for some reason or other this wood seems ill-suited for the purpose. The draping of a piano-back is described under "Curtains and Draperies".

The fashion of crowding the top of the piano with pots of flowers, photographs, and all kinds of *bibelots* is a bad one, and no really musical person would think of following it. Yet the long unbroken line of the

top is very ugly and inartistic. This defect may be remedied to a certain extent by fastening the curtain concealing the back to one of the wrought-iron or brass ornamental rods that stand up slightly above the top of the piano, or by attaching a shelf and rail, as shown in the illustration (fig. 44), to the instrument. If vases are placed on this shelf they do not affect the tone, and the rail is of great assistance in arranging the drapery.

Drawing-room Couches.—Although not so fashionable as some other kinds, there is no sofa more comfortable than the Chesterfield, with its "roll-over" ends and back. Next to this is the reproduction of an older style of sofa, with high square back and ends, and straight short mahogany or rose-wood legs. This looks best upholstered in velvet or furniture-brocade with an edging of closely-set brass or copper nails. The straight Empire couches with bolster-ends are not very comfortable, but they suit rooms furnished in a French style, and as they have no backs they may be placed in any position. Wicker-couches fitted with springs are popular on account of their cheapness, and, if nicely upholstered, are quite admissible in a simply-furnished drawing-room. Box-ottoman couches, although generally considered only fit for bedrooms, are often useful in small drawing-rooms, and can be made to look well by means of a prettily-draped valance and frilled cushions. A cane-lounge, furnished with cretonne-covered mattress and plenty of loose pillows, is as comfortable as many a more expensive couch, and is often convenient when placed near a French window in summer.

SUGGESTIONS FOR DRAWING-ROOMS.

1. **For a South or West Room.**—Wall-paper sapphire-blue; frieze of copper leather-paper, with shelf painted blue beneath it; and blue-and-white china jars and copper bowls placed upon the shelf. Wood-work all painted dark-blue. Carpet in Persian design, curtains of deep rose-coloured damask. Furniture Chippendale. Fender, fire-irons, and coal-vase of iron and copper.

2. **For a South or West Room not so light as No. 1.**—Wall-paper water-cress green; frieze of yellow poppies on white ground; paint deep-green with gold leather-paper panels on the doors; ceiling-paper green and white. Green-and-gold art carpet, curtains of deep-gold plushette. Furniture dull walnut, the chair-seats being of tan pig-skin. Fender, fire-irons, and coal-vase of brass.

3. **For a North or East Room.**—Geranium-red satin striped wall-paper, with a dado of anaglypta painted ivory white; ceiling-paper oak and white; wood-work painted white. Deep-blue Brussels carpet, blue tapestry curtains, and furniture black oak with rush-seated chairs. Fender, fire-irons, and coal-vase of brass.

4. **For a North or East Room with plenty of light.**—Blue-and-red wall-paper, wood-work painted light Indian red, ceiling-paper red and white. Oriental carpet, red-and-gold tapestry curtains, and furniture dark mahogany with royal-scarlet leather. Fenders and fire-irons of antique steel.

5. **For a small, dark Room.**—Blue-and-white chintz paper and white paint. Terra-cotta art carpet, terra-cotta serge curtains, and Sheraton furniture, the chairs covered with blue-and-red tapestry. Copper and iron fender, fire-irons, and coal-vase.

6. **For a very Inexpensive Room, rather dark.**—Wall-paper crimson, paint cream. Carpet sapphire-blue art square, curtains blue printed serge. Hardwood chairs stained dark-mahogany, 6*s.* 6*d.* each; cupboards in fire-

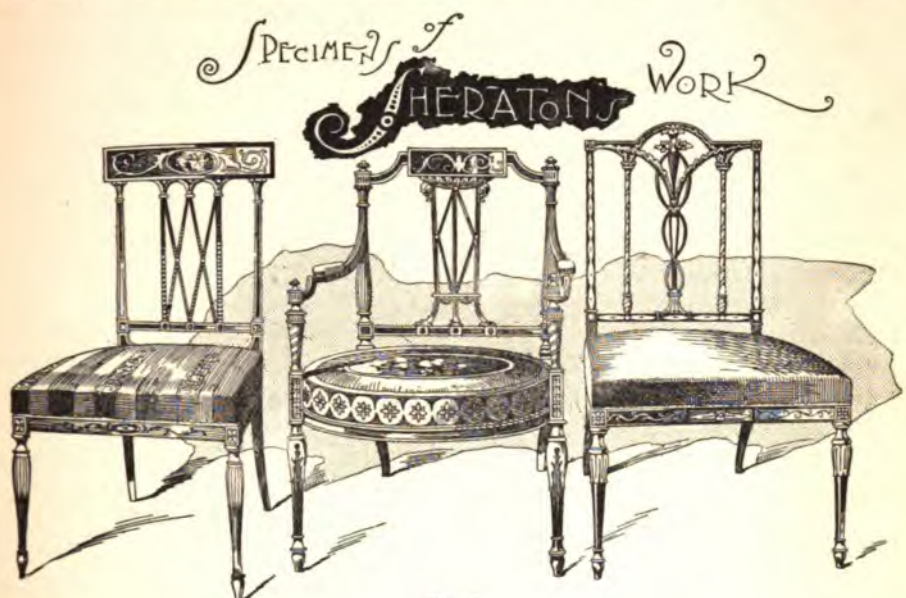


Fig. 45.

place recesses, stained dark-mahogany; panels of looking-glass in deal frames stained mahogany above them, with shelves on the top. Iron and brass fender and fire-irons.

THE BREAKFAST-ROOM.

The breakfast-room is rarely either a cheerful or artistic apartment, and only too often the furniture consists of ill-assorted odds and ends; yet, if any meal needs to be eaten in pleasant surroundings it is the first one of the day, when people, unless very young, exceptionally healthy, or unusually philosophic, are apt to be low-spirited and pessimistic.

A Bright Breakfast-room—A successful method of brightening a dull room is to hang the walls with a paper of a warm, glowing yellow tone, not one that has any suspicion of green or lemon about it, but a rich, full colour approaching orange, though less hot and fiery. The design should be conventional, bold but not niggling or paltry, nor yet, on the other hand, over-large if the room is small. If the walls are very lofty in proportion

to the floor space, it is desirable to break the surface by either a frieze or dado, which may be of anaglypta or a kindred material, painted brown, and the raised portion of the design "wiped" to show the cream ground beneath, while all the wood-work of the room, including the mantel-piece, should be painted brown, or, better still, stained medium oak. A still lighter and more cheery effect would be produced by a dado of wood-panelling or even ordinary match-boarding, painted cream (or rather ivory, as even the best paint has a tendency to darken with age), the doors, mantel-piece, and other wood-work being similarly treated. So much white paint, however, requires a great deal of attention if it is to be kept in good order; therefore to those who cannot afford a large staff of servants the darker scheme of colouring may be recommended.



Fig. 46.—Hob Basket-grate
(by Messrs. R. H. & J. Pearson, Ltd., London).

The Fireplace.—The mantel-piece of such a room should be simple in design, and rather high, with a narrow shelf supported by brackets of good outline, and surmounted by an unpretentious overmantel. One that has an autotype set into a flat panel, with small cupboards flanking it on either side, and a narrow shelf above, on which Delft plates may be ranged, is both useful and sufficiently ornamental. A narrow strip of looking-glass of the width of the mantel itself, with a shelf at the top, is equally neat and pretty.

As to the grate, there is much to be said in favour of a gas-fire when the room is one that is required to be warm at an early hour. For burning coals nothing is more economical than the slow-combustion "parson's" grate. But from a decorative point of view the old-fashioned hob-grate (fig. 46), which provides such cosy quarters for the copper kettle—without which no breakfast-parlour is completely equipped—and muffin dish, is most desirable. If there are tiles, they should be either plain deep-yellow, or shaded softly from pale-brown to orange. The fender ought to be of wrought-iron and copper, with fire-implements to match. In another style, a plain iron curb or low brass rail, with a low, broad, well-padded stool or seat made to fit round it, makes an admirable fender.

Carpets.—A square carpet—Axminster, Persian, or Turkey, if possible

—should be chosen, in tones of deep-yellow and warm brown, with dashes of rich blue, the surround being plain cream, or cream-and-orange. Japanese matting will be in harmony with the walls; or the floor may be wholly covered with brown felt or cord-matting, if there are plenty of rugs.

Curtains.—The choice of curtains must be guided to a considerable extent by the shape and style of the windows. If they are rectangular, plain straight curtains of printed velvet, brown serge, or linen-plush, edged with the narrowest of tufted bindings, will be a safe selection. Brown linen, too, ornamented with a boldly-designed *appliqué* of deep-yellow linen, makes uncommon and effective hangings.

Window-seat.—If at all possible there should be a wide window-seat, with shelved cupboards beneath for papers, photographs, and unbound periodicals. It should be comfortably upholstered with hair-stuffed mattresses, covered to harmonize with, not necessarily to match, the curtains; and should also be provided with plenty of down-stuffed cushions.

Furniture.—The furniture should be on more modest and simpler lines than that of a dining-room. With the warm yellow scheme suggested, dark oak accords excellently; but it should, if possible, be English-made, solid, well-finished, and devoid of any superfluous ornamentation, while the surface should be wax-polished until the beautiful grain shows to perfection.

Key-plates and handles may be of copper or iron, as finely wrought as the purchaser can afford. Plaques of hammered copper, if they have real artistic value, may be judiciously introduced as ornaments on the sideboard. If the room is small, however, it is a good plan to dispense with a conventional sideboard altogether, substituting for it simply-designed *buffets—i.e.* cupboards with wide flat tops and several shelves above, fitted into the recesses between the chimney-breast and wall. These, well-finished, painted to match the wood-work, and fitted with good brass handles, should not cost more than £5 or £6 each, and with either a genuine old oak gate-table or a careful copy, or some other antique shape, a set of plain oak-framed chairs, with rush or brown morocco or pig-skin seats, as means permit, and a writing-table or bureau, will equip a small room sufficiently for all practical purposes.

The green-stained furniture which has been in fashion during the past few years is well suited for use in a breakfast-room which, possessing a warm and sunny aspect, permits the decorator a larger choice of colour-schemes.

Decorative Effects.—Walls hung with a soft blue paper, wood-work stained green, blue tiles in the fireplace, dark-green floor-matting—such as can be bought for 1*s.* or 1*s.* 6*d.* a yard,—and curtains of tapestry in which shades of blue and green are blended, will make a pleasing setting for a quaint, but not fantastic, suite of green-stained oak, with rush-seated chairs. Or, there may be a high dado of dark-green arras-cloth, with a blue-and-green paper above the rail, and curtains of green linen with bands of *appliqué* in blue.

The blues and greens must be carefully chosen, otherwise the result

will probably be so discordant as to be unbearable. Della Robbia pottery looks charming in a blue-green room, and so does some of the more homely dark-green ware made in the south of England.

Need it be said that everything about a breakfast-room should be as fresh and dainty as possible? The sideboard or buffet-cloths should be of linen, finely embroidered; sweet-scented, old-fashioned flowers should fill bowls and jars on mantel-shelf and table; and every scrap of metal-work, including the copper kettle, should be as bright as "elbow-grease" can make it.

SUGGESTIONS FOR BREAKFAST-ROOMS.

1. **For a Room with a very Sunny Aspect.**—Dado of lincrusta painted ivory-white; paper with leaf design in pale-green or ivory ground. All wood-work painted white. Square carpet in shades of green; green-and-ivory matting surround, curtains of rose-patterned chintz, or a silk and wool brocade in pale colours and a small delicate design. Mahogany furniture in Sheraton style.

2. **For a Room with rather a Dull Aspect.**—Paper with conventional design in two shades of golden-tan; deep frieze distemper in lightest shade of tan, with stencilled design in oak-brown. Wood-work stained oak, mantel-piece "pokered" with proverb or motto on stained background. Blue-and-brown carpet; blue-and-brown velveteen curtains, fumigated oak furniture, seats of brown leather.

3. **For a Well-lighted but not very Sunny Room.**—Paper, dull-red, formal pattern; frieze of plain red paper, cream paint, shelf frieze-rail with row of blue Delft plates. Mantel-piece painted cream; blue-and-white Dutch tiles. Red carpet, surround painted cream; red and cream damask curtains; oak furniture, old English if possible.

THE LIBRARY OR STUDY.

Every home of moderate size ought to have one room set apart for literary recreation; when the head of the household is a genuine book-lover, the arrangement of this apartment is an important matter.

Library Furniture.—The furniture, however simple and inexpensive, must be substantial; it is impossible for anyone to write with comfort sitting on a rickety chair at a shaky table. Three chairs, a heavy writing-table of the pedestal type with a nest of drawers at each side, and a revolving bookcase, will be quite sufficient for a small room, in addition to the book-cases lining the walls, which will be described immediately. An excellent and inexpensive make of chair, suitable for a small study, is shown in fig. 47, the one with arms costing 25*s.* 6*d.*, and the other 16*s.* 9*d.* It is often possible in second-hand shops and sale-rooms to buy, at a very

low price, old-fashioned, strong-framed chairs, that only require re-seating to serve the purpose admirably. Leather, stamped velvet, tapestry, and plushette are the best fabrics for covering the seats, and if there is a horse-hair stuffing so much the better. Pedestal writing-tables cost from £3, 10s., but these also can often be bought second-hand with advantage.

The Bookcases.—The bookcases, of course, deserve the chief consideration; their style and size must depend on the number of volumes to be accommodated, and also on the amount that can be expended. A set of book-shelves may cost anything from thirty shillings or so to a hundred pounds or more. It is always best, whether one is providing for a small study or a large library, to have the book-shelves made to fit the room, instead of buying them ready-made, but tenants of rented houses will do well to see that the shelves are not nailed to the walls, but screwed into battens arranged for the purpose, so that they can be easily removed; otherwise they become the landlord's property, and no claim can be made in respect of them on the termination of the tenancy. Glazed bookcases are quite unnecessary, unless the books they contain are intended for show and not for use. Books do not suffer, but rather benefit, by coming into contact with the air, and leather edges to the shelves will protect the tops from dust. In all the best bookcases the uprights that support the shelves are made with grooves into which the shelves slide, so that the height can be regulated to the size of the books. This plan can be followed with fixed bookcases also, the extra cost being insignificant compared to the convenience thus gained. The shelves should not reach to a height of more than seven feet above the ground, nor should they come right down to the floor. A space of eighteen inches should be left between the lowest shelf and the floor, enclosed either by sliding wood panels or by serge curtains suspended from slender brass rods. Behind, magazines and papers can be neatly stowed away. The tops of the cases should be finished with a carved wooden balustrade; the balcony rails, sold from a few pence the foot ready for staining, will serve the purpose; and an excellent effect is produced by a panel or rather strip of stained and polished wood above

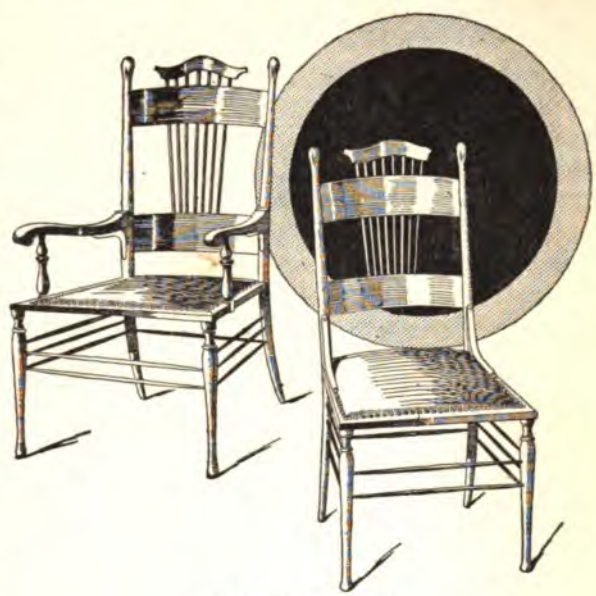


Fig 47.—Library Chairs.

it, flat against the wall, and reaching to the frieze or frieze-rail. This sub-frieze of wood forms a good background for china plates or curios of any kind. Some persons who do not possess a sufficient number of volumes practically to "line the walls" prefer dwarf bookcases; but these are not advisable, as books that are kept too near the floor are exposed to draughts and dust, and if the room is on the ground-floor, the lowest row of books will probably suffer from damp also. A revolving bookcase (fig. 48) is a most useful possession, especially in a small room; it occupies very little space, and will hold a surprising number of volumes. When the number of books is not large, artistic hanging bookcases such as those shown in fig. 49 are both convenient and pleasing to the eye. They should be fixed with the lowest shelf about 4 feet above the ground, and the wall spaces above and between them may be adorned with good prints, or photographs that have some special interest attaching to them.

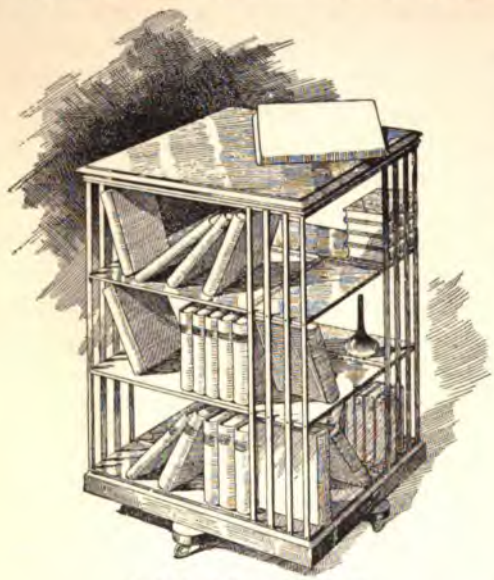


Fig. 48.—Revolving Bookcase.

The Writing-table.—Even in the smallest and most simply-furnished study the appointments of the writing-table must be irreproachable; and

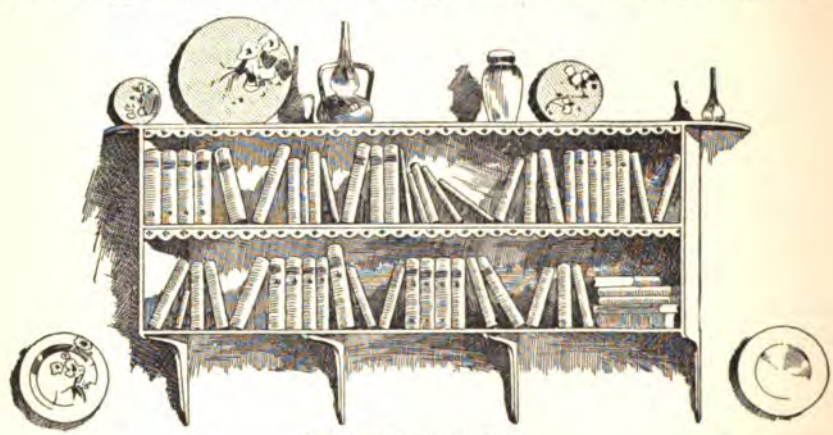


Fig. 49.—Hanging Bookcase.

this is not so much a matter of expense as of taste and care. It is useless to display handsome ink-stands and blotting-pads if the ink in the one is dirty, thick, or altogether dried up, or the paper in the other torn and soiled. Such a state of affairs shows careless housewifery, to say the least

of it. The shape of the ink-stand must naturally be determined by individual taste, but the ink-pots, which may be of either glass or china, must be large enough to hold a fair quantity of ink, for a "thimbleful", which is all that some fanciful pots will contain, dries up in a day. They must also be so fashioned that it is impossible for them to overbalance. There should be two ink-pots, one for black and the other for red ink; and in addition, two blotting-pads, or a pad and a blotting-book—one on each side of the table—always well supplied with clean white blotting-paper; a pen rack or tray with penholders fitted both with fine and with broad nibs, a well-filled note and envelope case, a post-card case, a date-stand, a letter-balance, a string-box with scissors, a paper-knife, a small box with three compartments, one for pins and paper-fasteners, one for pen nibs, and one for stamps, a taper and match stand, and a rack or small basket for holding letters should also be in every study. It is impossible to quote prices for these items; they can all be bought at stationers' shops from a few pence each to almost any sum that extravagant persons may wish to give. A pair of candlesticks is always included in "library table sets", but when a good reading-lamp is used, the candlesticks are ornaments, not necessaries.

Wall Decorations and Oddments.—Really good oil-paintings, family portraits and the like, are often seen in large libraries, and they suit their surroundings well, but in a small study coloured pictures should be conspicuous by their absence; and the prints should be preferably of small size, with black or dark wood frames. There will probably be little wall space left for adornment when all the book-shelves are in place, except above the mantel-piece and over the door, but here such things as favourite foils, curious arms, and oddities of all kinds can be tastefully displayed; while, if the study is sacred to the master of the house, and has to serve him as a smoking-room also, a carved pipe-rack will probably be found above the mantel-shelf. In such a case, too, a small carved or stained wood table, with cigar and cigarette box, tobacco-jar, and match-stand, will be a necessary addition to the appointments. Even in the smallest study a serviceable waste-paper basket should find a place. If it is of the ordinary open lattice pattern, it should be neatly lined with sateen or linen to prevent small pieces of paper from straying out on to the carpet; but it should not be "draped", as it might be with propriety in drawing-room or boudoir. A brass or carved-wood newspaper-rack is also a desirable addition.

Carpet and Curtains.—A large Oriental rug, or, if this would be too expensive, a Romanhurst carpet, costing from 17*s.* 6*d.* according to size, is best for the floor-covering, with stained and varnished surround; or either cork carpet or parquet-pattern linoleum might be used, with two cheap Oriental rugs, a small one under the table, a larger one as hearth-rug. Window-curtains of printed art serge in art-blue, russet-brown, or terra-cotta, edged with ball fringe, are suitable. A portière to match is a necessity; it will serve to exclude noise as well as draughts.

Heat and Light.—Electricity or oil is a better illuminant for the library than gas, which is apt to damage bindings. For heating purposes,

there is nothing so good as a coal fire in an ordinary slow-combustion grate. Even if the room is not in regular daily use, a fire should be lighted frequently, especially in damp weather; otherwise the books will inevitably be attacked by mildew, and ruined sooner or later. For light, a powerful hanging-lamp over the table, with an adjustable shade so that the light can be concentrated at will either on the table or on any part of the room, may be recommended. But failing this hanging-lamp, the "Queen's"

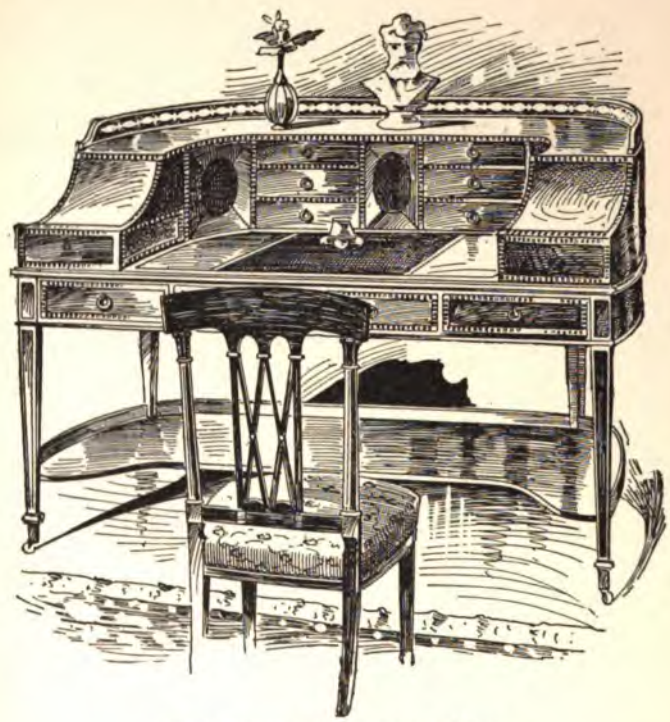
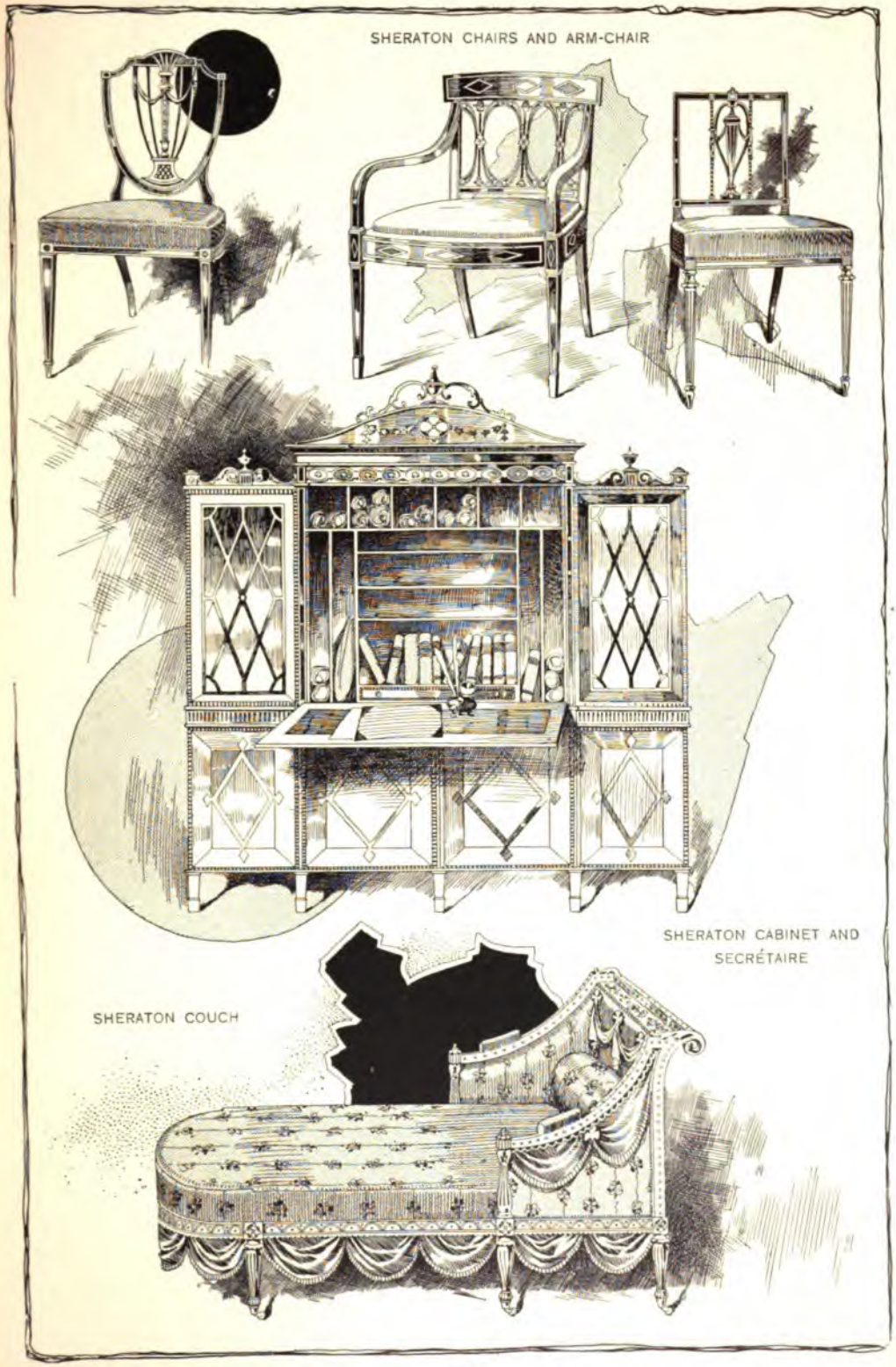


Fig. 50.—Sheraton Writing-table and Chair.

reading-lamp, with one or two burners, will serve well. It costs from 9*s.* 6*d.* to 25*s.* according to quality. There are cheaper reading-lamps of this description, but they do not wear well, and soon get out of order.

A Larger Library.—The foregoing notes are applicable to the small room that constitutes the library or study in an eight or ten roomed house; though the general principles laid down may be equally well observed when the library is of larger dimensions. Those, however, who can afford to have a spacious library can generally afford to spend a good deal of money on it; and in such a case the furniture should be at once handsome and comfortable. Either dark carved oak or mahogany furniture of eighteenth-century design, preferably Sheraton, is most appropriate, with the bookcases in oak or mahogany to correspond; but there must be no mixing of styles, the whole room must be in harmony. A large old-fashioned Turkey carpet is the ideal floor-covering, over a parquet or



CHARACTERISTIC SHERATON FURNITURE.

Thomas Sheraton (1751–1806) was the last of the famous cabinet-makers of the 18th century. In 1790 he published his first collection of "Designs for Furniture", and this was followed by numerous other publications of a similar class.

stained and polished floor; the hangings and decorations should be of rich subdued colours, the former of heavy fabrics, while the fireplace appointments, curb, fire-irons, and coal-scoop, should be of bent iron and copper. The ideal library window is a deep square bay, facing westward, with leaded diamond panes, the lower ones filled with faintly-tinted glass, the upper ones with richly-stained designs. Such a window, with a deep, low window-seat strewn with gorgeous-coloured cushions, is a joy for ever to one of artistic temperament.



Fig. 51.—Library Steps (can be folded into form of chair).

Although genuine antique furniture is so rare and costly that it can only be acquired by wealthy connoisseurs, excellent replicas of old designs both in oak and mahogany are always obtainable; many of them in fact are so skilfully made that it is difficult even for a connoisseur to detect the difference between a genuine antique piece of furniture and the modern replica; but all the best furniture-makers who sell this class of goods are careful to give information at once upon this matter. Among the luxurious plenishings of a handsome library are a well-made bureau, one or two quaint corner-cupboards, a grandfather's clock, and a large picturesque screen of embossed leather studded with copper nails. In such a room also the bookcases would be high, and therefore a proper set of library steps would be needed in oak or mahogany. The illustration (fig. 51) shows a library chair convertible into a substantial set of steps by a very simple mechanism. It is obtainable in either carved oak or mahogany. (See also "Management of a Small Library", vol. iv.)

BEDROOM FURNITURE AND DECORATION.

The revolution which has taken place in decoration and furnishing during the past twenty or thirty years is nowhere more marked than in the sleeping-rooms. Until well into the seventies there were two ways, and two ways only, of treating a bedroom. If it was classified as "best" it had "massive" mahogany furniture, heavy, ugly and gloomy, and a four-post—

or at least a "half-tester"—bedstead piled so high with straw palliasse, wool or hair mattress, and feather-bed, that it had to be provided with a scaling-ladder in the shape of a set of mahogany steps. This erection was draped with smothering folds of dusty damask or stiff moreen, while curtains to match trailed from beneath a huge gilt cornice above the window. The walls were hung with a drab-and-gold paper, the paint was maple-grained, and the floor covered with a Brussels carpet of huge pattern and discordant colouring.

In the "best" rooms, however, the furniture, if ugly, had at least the advantage of solidity; not so that of the secondary bedrooms. Here painted or japanned chests of drawers and wash-stands, deal dressing-tables petticoated with pink glazed calico and book-muslin, and bedsteads of grained wood or of the thinnest of iron tubing painted a virulent green, were universal. The paper was generally an atrocity, spotted with magenta or Prussian-blue flowers, while the floor-covering consisted of either a threadbare Brussels carpet inherited from one of the grander rooms, or a striped druggeting in dingy drabs and browns.

The past score of years has seen a vast improvement in respect of all these matters. Pretty suites conveniently planned and fairly well made—though in this latter respect they scarcely compare favourably with the better kinds of old-fashioned furniture—are now to be had at prices to suit all purses. Papers, carpets, and the light and cleanly cretonnes and art linens are all cheap, while the hygienic advantages of the modern style of bedstead and bedding are too obvious to need emphasizing here.

An Ideal Bedroom.—Of course a bedroom of ideal design in itself is rarely met with. It should be of fairly ample proportions, well-lit, yet not so over-windowed as to be unendurably cold in winter; the doors and windows arranged to leave a suitable situation for the bed, neither facing the direct morning light nor exactly in the teeth of the worst draught in the room, and a convenient space for the dressing-table where a good light will fall on it without the necessity of placing it right across the window.

A tiled recess with a fitted wash-basin supplied with hot and cold water, the drain-connections being, of course, absolutely perfect, should be found in an ideal bedroom. Well-arranged cupboards, too, carried right up to the ceiling so as to avoid that useless, dust-collecting space at the top, are indispensable. And last, but not least, the grate must be of the best slow-combustion type, since it is most essential that a bedroom stove should be of a kind in which it is possible to keep a small fire burning steadily without constant attention.

Generally speaking, the rules for the decoration of a bedroom apply equally whether the apartment be large or small.

It may be taken as a general principle that the colouring of a bedroom should be light, not necessarily pale, but the reverse of heavy and sombre. Daffodil-yellow, reddish terra-cotta, warm buff, and the redder tones of pinks are most suitable for rooms facing north or north-east, while almost

all shades of green and blue, lemon-yellow, and salmon-pink are better for those that get a fair amount of sunshine. Cream or ivory paint is always a safe choice for all bedrooms; but in houses where there are many children, and especially in schools and boarding-houses, it is a more economical plan to stain the wood-work either oak or walnut.

Bedroom Papers.—The design of a bedroom paper is important. It must not be "spotty", it must not repeat itself too frequently or "run into lines", and it must not be one of those eccentric and irritating patterns of flying birds that never "get any forrarder." or of cherubs sitting insecurely on prickly roses, or chasing butterflies that they never catch. Even the designs of bows of ribbon and high-handled baskets of flowers falling over on their sides, which have been popular of late, are apt, pretty enough in themselves though they may be, to grow annoying when they have to be contemplated during the long, feverish hours of an invalid's day.

Whether floral-patterned papers are altogether desirable in bedrooms is a moot point. They are often very graceful and charming, but the majority have a tendency to fidgetiness, which is strengthened when the curtains match the paper in pattern as some decorative authorities advise.

On the whole, for a room in regular use, the best type of paper is one which has a purely conventional pattern or a very simple design of natural foliage in two shades of one colour. There may be a frieze either of plain colour-wash or ingrain paper, or, if a stronger relief is desired, of festoons of flowers. Striped papers in two tones of colour look particularly well under a wide floral frieze.

Theoretically, the so-called washable papers are perfect from a sanitary point of view for bedroom walls, but as a matter of fact they will bear nothing more than the most cautious and gentle sponging, while if the wall is in the least degree damp they become quickly and hopelessly stained. Therefore, especially as they are rarely wholly satisfactory in either design or colour, their advantages over ordinary wall-papers are less real than apparent.

Bedroom Floor-covering.—A favourite floor-covering for a bedroom in a modern middle-class house is one of the thin wool carpets popularly known as "art" carpets. They are to be had in good colours and inoffensive patterns, except that the latter are sometimes disproportionately large in the smaller carpets. Considering the lowness of their price they wear well. There is one decided objection to them, however; they are of such thin and loosely woven texture that a great quantity of dust works through them, necessitating their frequent removal for cleansing purposes. And this, in a modestly-staffed household, means a great deal of extra work.

Brussels carpet, having a close hard surface, is always cleanly, but it is unpleasantly cold to unshod feet. Eastern carpets are rarely out of place anywhere, but for use in a bedroom the very long-piled kinds are certainly less appropriate than those with closer and smoother surfaces. Indian mattings resemble Brussels carpets in their chilliness, while, in common with "art" carpets, they have the fault of letting dust through. Neverthe-

less, if fitted carefully all over the room and strewn with plenty of soft rugs, nothing is really nicer than one of these pretty mattings, and it can be kept delightfully clean and fresh if it is occasionally wiped over with a cloth wrung out of salt and water. Matting squares neither look nor wear particularly well, and cannot be recommended.

When a square of carpet is used the margin of boards round it should not be covered with any dusty stuff such as felt or jute matting, but stained and waxed, or painted white. This last method of treatment is well suited to a room decorated in a very light and dainty style.

When the floor is in thoroughly good order it may be advantageously stained all over, all that it then wants being some good-sized rugs. But in this climate it is necessary that if the boards are not "tongued and grooved", as they ought to be in a properly-built house, their joints should be made perfectly tight by the insertion of slips of wood. Otherwise the arrangement is very cold and uncomfortable.

Bedroom Curtains.—The subject of bedroom curtains is fully dealt with in another section of this book, therefore it is unnecessary to discuss them at length here. It may be said, however, that cotton or linen is more suitable for their material than any unwashable stuff, and that they should be ample enough to draw right across the window, as well as sufficiently thick to darken the room effectually if necessary. The stouter makes of art linen, coloured Bolton sheeting both plain and patterned, printed dimity, cretonne, and the newly-revived glazed chintz are chief among the most suitable fabrics for bedroom hangings.

Short curtains (half blinds) of some kind are necessary evils in the majority of town houses, but fortunately the prettiest kind is also the simplest. Plain soft muslin — white or cream — tussore silk, tambour muslin, and Madras muslin of small design, are all equally suitable materials for the purpose. If made of tussore silk, the little curtains may be edged with a narrow tufted silk binding and allowed to hang loosely from the brass rod at the top, but those of muslin should be tightly and evenly stretched between rods run through the two hems. Another pretty kind of short curtain is made of cream or white canvas striped with broad insertions of guipure, crochet, Torchon or Russian lace.

Bedsteads and Bedding.—Until recently the only kind of bedstead regarded as admissible in any modern house was one made entirely of metal, either brass or iron, or a combination of both. And very ugly and badly designed most of these bedsteads remained, in spite of the enormous improvements in almost all other branches of furnishing. So ugly, indeed, that in nine cases out of ten the bedstead, no matter how much had been expended on it, was a blemish in a room that might have been otherwise charming in every detail. About 1885, however, a reaction in favour of wooden bedsteads began to set in, and now there is scarcely a furniture-shop that has not a "large selection" of these revivals on view. For the most part, the new wooden bedstead (fig. 32) is of simple and satisfactory design, and as it has iron laths and joints, it is at least free from one of the

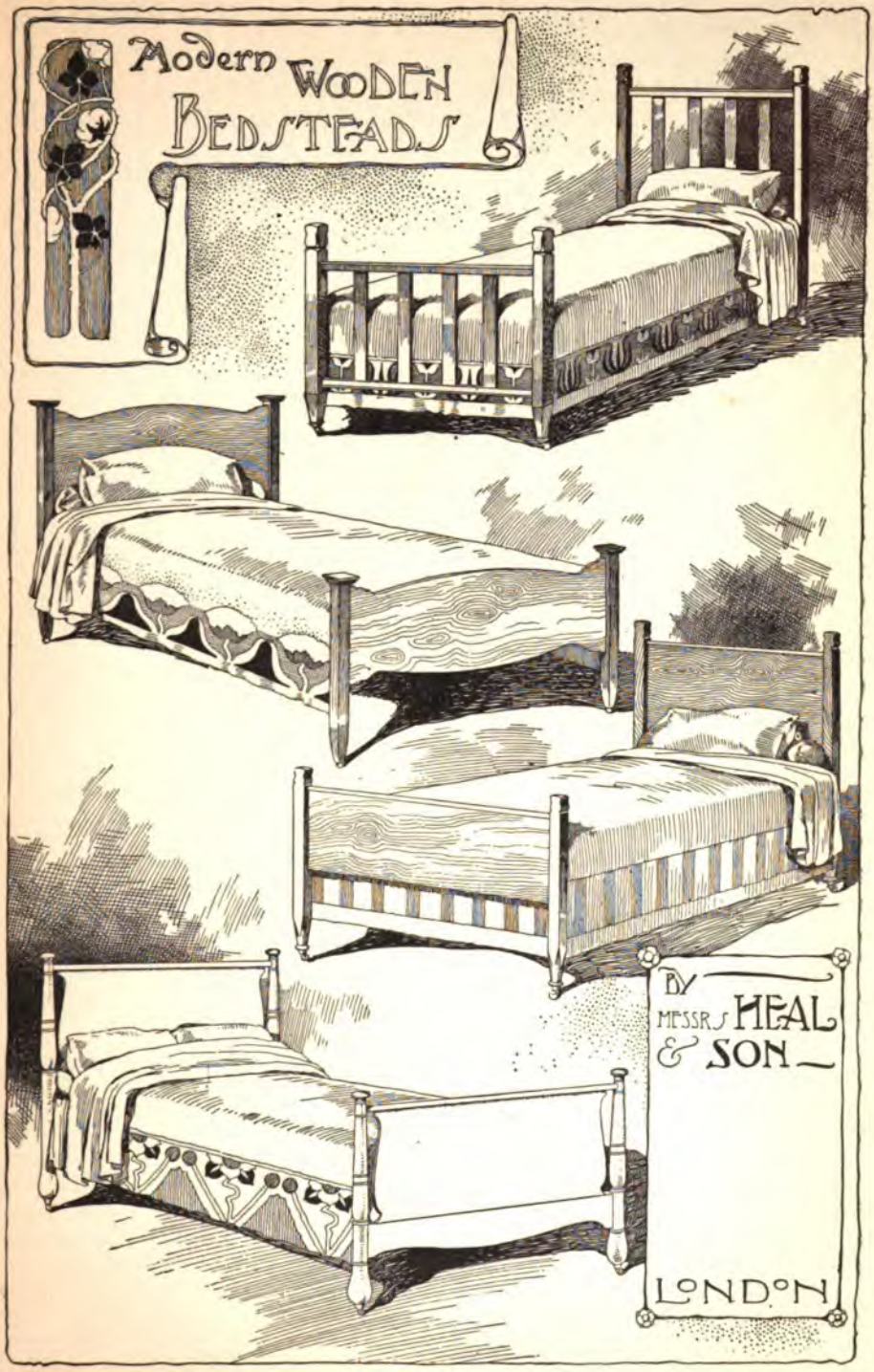


Fig. 52.

notorious drawbacks of the awful catafalque of early Victorian days with its wood laths and elaborate pilasters and cornices. It is true that some of the modern wooden bedsteads verge on the eccentric. Those in an Egyptian style, for example, should be avoided, as well as all that display on head and foot boards weird emblazonments of rising and setting suns or of more or less apt mottoes in fantastic lettering. Novelty may lend to such things a transient charm, but they are not pleasant to live with.

Bed draperies are practically extinct. The simple hangings from the swinging Italian wings to ward off draughts, and the flat curtain against the wall behind the bed-head for decorative effect—nothing more is desirable or fashionable. Some mistresses still cling to the valance or flounce round the bedstead frame, but this is entirely unnecessary in these days of low bedsteads and big coverlets, besides encouraging the untidy and unwholesome habit of storing boxes and other things under the bed.

The poor quality of the actual bedding used in houses otherwise well and even luxuriously furnished, is a strange but indisputable fact. Ancient "box" mattresses with broken springs, overlays as hard as paving-stones or full of horrible lumps, insufficiently-stuffed pillows with quills sticking out through the coarse, uncased ticking, and common cotton sheets—all these are often met with, not only in expensive provincial hotels, where they appear to be the rule, but also in the private houses of the well-to-do middle-class. In this respect French domestic management compares favourably with English, for in all parts of France great attention is paid to the regular remaking and cleaning of the bedding, while linen sheets, well-bleached if coarse, are almost universal.

The box-spring or French mattress, comfortable as it is when of first-rate quality, has gone out of vogue since the introduction of the cheaper and cleaner woven-wire and fine chain mattresses of which there are so many varieties in the market (fig. 52 A). The cheapest class of these wire mattresses is not particularly durable, but the more expensive sort lasts exceedingly well and, combined with a thin hair overlay, makes a delightful and healthy couch. A chain or wire mattress should always have a protective cover to prevent its chafing the mattress over it, and this cover should not be of the dust-collecting stuffy felt often recommended by upholsterers, nor of thin calico, but of a very thick, close-woven, gray material known as sail-cloth. A fitted cover, dropping completely over the ends and sides of the mattress, is preferable to one that is merely tied on by means of strings at the corners.

For the overlay good horse-hair is undoubtedly the best filling, but those chilly persons who prefer the warmer wool may be advised to choose an overlay stuffed with white wool, with a thin layer of the finest horse-hair in the centre. Every overlay should, of course, be provided with a neat outer case of brown holland or unbleached calico made to tie or button on.

Bedroom Furniture.—The variety of bedroom suites to be found in every shop of any importance is so great, and prices and fashions change

so frequently, that it is useless to attempt to give more than a few brief general hints as to selection and purchase.

Broadly speaking the best woods for ordinary bedroom furniture are, in order of desirability:—Mahogany, American walnut, ash, satin-walnut (American hazelwood), birch, maple, and pitch-pine. Oak is delightful in every kind of room, but it is not generally popular for bedroom furniture at present, although when stained green it has been used rather largely during the past few years for the quaint and ultra-æsthetic type of

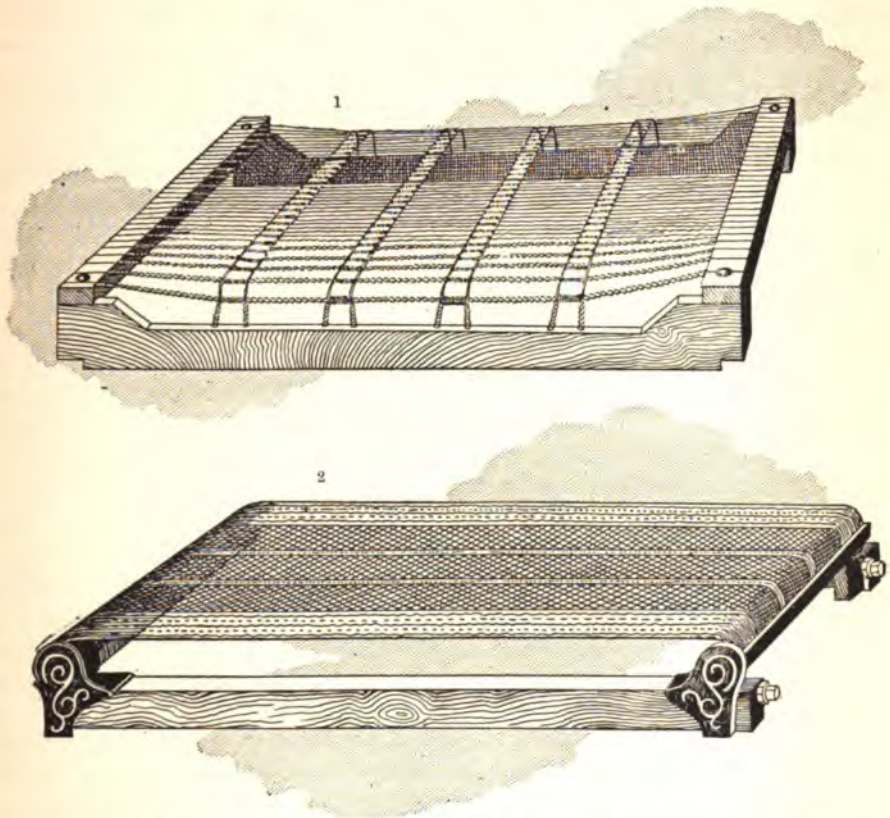


Fig. 52 A.—1 Patent Spring Mattress on Wooden Frame; 2. Woven-wire Mattress on Wooden Frame.

bedroom suites which are specialities of one or two manufacturers. This green-stained furniture, whether of ash or oak, should only be purchased if it is the production of a high-class firm, for in the commoner qualities found in cheap shops the green stain not only is a bad, crude colour to start with, but quickly fades and grows dingy.

When buying bedroom furniture it is well to keep in mind the following rules:—

1. Avoid much ornament, unless prepared to pay a high price for thoroughly good work. Rough, ill-designed carving becomes an eyesore;

cheap inlaying drops out piecemeal; and the beauties of gorgeous handles of thin stamped brass are fleeting.

2. Examine the back and the inside of each piece of furniture, and see that the drawers run well, that the joints are close, and that there are no shrunk seams and chipped places "made good" with putty and varnish. Notice that the locks are well finished and the handles put on straight.

3. The wardrobe should be really commodious. Some of the most fashionable designs are charming to look at with their nooks for "art pottery", book-shelves, and array of minute drawers, but they are much less useful than the older and uglier ones possessing plenty of hanging accommodation and a number of roomy drawers. Several moderately shallow drawers are more convenient than a smaller number of very deep ones. There should always be a dust-board on the extreme top of the wardrobe.

4. Gray, brown, or red marble is better for a wash-stand top than white, which stains very easily. See that the back is really high enough to protect the wall-paper from the splashes; three rows of tiles are better than the more general two.

5. A dressing-chest is more useful than an ordinary table. When choosing, be sure that the so-called "jewel drawers" are big enough to be of use. They should be deep enough to take a hair-brush. See that the mirror is free from defects in the glass, and that the screws supporting it work properly.

Fitted furniture is a great boon in a small bedroom, but it is naturally expensive, and for obvious reasons is rarely indulged in by the short-lease tenant. Still, modifications of the idea may often be carried out at a small cost. For instance, if there are the usual recesses on each side of the chimney-breast (fig. 53), one can be fitted with a low cupboard to serve as a wash-stand, the top of the cupboard being covered and the recess lined, to the depth of some 18 inches, with anaglypta painted with bath-enamel. At the top of the recess another cupboard or open shelves can be fixed. The corresponding recess on the opposite side of the fireplace may be fitted with a shelf placed about 2 feet 4 inches from the ground to serve as a writing-slab, and if the recess is sufficiently wide, very short shelves can be fixed under it on either side, leaving the centre clear for the writer's knees. Little curtains of linen, fine serge, or silk could screen these shelves, and the top of the recess might be filled with book-shelves or with a cupboard

A corner wash-stand has a decided advantage over one of the ordinary shape in a small room, and a wardrobe of similar design is also useful. But elaborate constructions combining wash-stand, toilet-table, and wardrobe are rarely satisfactory, and should be avoided, except in the case, perhaps, of a small dressing-room.

Toilet-ware.—It is not an easy matter to find a really nice service of toilet-ware. Very little improvement has taken place in this branch of bedroom accessories during the past thirty years, and nineteen sets out of every twenty seen at an ordinary china-shop are clumsy in shape, while the design is poor in drawing and crude or dingy in colouring. The plain

coloured services of so-called "art-ware" form almost the sole exception to this rule. There are three or four shapes to be had in these services at present, the prices ranging from 12*s.* 6*d.* to about 25*s.* or 30*s.* per set, and the majority are fairly well designed and of good rich colour. Except for occasional use, however, the cheap art-ware is anything but a satisfactory purchase, for not only is it brittle and easily chipped, but the glaze cracks so badly that there is great difficulty in keeping it clean. Consequently, unless one of the best and most expensive of these art-pottery services can be afforded, it is wiser to fall back either on a perfectly plain white or ivory set, or one that has an inoffensive floral or conventional design printed in one or two shades on a white or creamy ground.



Fig 53.—Wash-stand and Writing-desk Fitments for small Bedroom.

Finishing Touches.—After all, the details, the finishing touches, make the chief difference between a cosy, cheerful bedroom, and one that, although it may be provided with all actual necessities, is bare, inhospitable, and comfortless.

The home-like bedroom, no matter how plain its furniture may be, has at least one really comfortable chair, not a cheap wicker thing that squeaks at every movement; its chimney-piece and table ornaments, if simple, are well-chosen, and not merely the damaged refuse of the drawing-room; there are a few good autotypes or photographs on the walls, in place of illuminated texts in paper rosette frames; and if there is no electric light or gas available there are plenty of good wax-candles—and a full match-box.

Except in midsummer, the fire should always be kept ready laid for lighting behind an easily-removed screen, and an extra bed-covering—an eider-down, an Italian silk rug, or even a small blanket—should always be provided in a guest-room, for although it is never pleasant to feel cold, the misery is accentuated in a strange house.

SUGGESTIONS FOR BEDROOMS.

1. **For a very Sunny Room.**—Satin striped paper in two shades of pale-green; 20-inch frieze of shaded pink roses and foliage, ivory paint. Curtains of rose-patterned cretonne, lined with pale-green. Bed-spread of green linen embroidered with pink and ivory flax-thread. Carpet in shades of green with wide margin of ivory-painted boards. Pink tiles in wash-stand; ivory or pale-green toilet-service. Ash or pitch-pine furniture.

2. **With Walnut Furniture.**—Striped paper in two shades of soft turquoise blue, frieze of pink may or apple blossoms on blue ground, wood-work stained walnut-brown. Blue and pink cretonne curtains lined with plain pink. Bed-spread of alternate strips of cream linen embroidered in blue, and insertions of coarse cream lace lined with pale-pink. Carpet in shades of blue; surround stained walnut; turquoise-blue tiles in wash-stand. Toilet-service cream with pink flowers.

3. **For a Room with a North or North-east Aspect.**—Conventional-patterned paper in tones of deep yellow, paint a deep shade of cream. Curtains and bed-spread cream. Bolton sheeting, either printed in yellow or ornamented with *appliqués* of yellow linen. Cream fitted matting on floor; rugs in tones of yellow, brown, and orange, with touches of blue. Brown tiles in wash-stand, deep-yellow toilet-ware. Mahogany or walnut furniture.

4. **For a well-lighted Cold Room.**—Paper in two shades of bright red; white paint. Curtains and bed-spread of dark-blue (Delft) and white printed cotton. Blue and white Dutch tiles in wash-stand; blue and white toilet-service; red carpet. Furniture, oak or enamelled.

5. **For a small Snug Room.**—Yellow daffodil-patterned paper, plain leaf-green frieze, green paint. Plain green linen curtains edged with tufted fringe; bed-spread of white linen embroidered with daffodils. Green carpet; green tiles in wash-stand. Plain yellow or daffodil-patterned toilet-service. Any kind of furniture not too light in colour.

6. **For a Room with Stained Green Furniture.**—Plain cartridge paper in a very soft, dull blue; 22-inch frieze of conventional foliage in tones of blue and green; wood-work stained green or painted dull-blue. Green linen curtains and bed-spread with wide borders of blue linen *appliqué*. Blue and green, or plain blue tiles in wash-stand; toilet-service of blue and green Barum ware. Floor covered with green matting; or stained, with loose rugs in the two colours.



MORNING ROOM

Specially designed for "The Book of the Home" by S. J. Waring & Sons, London



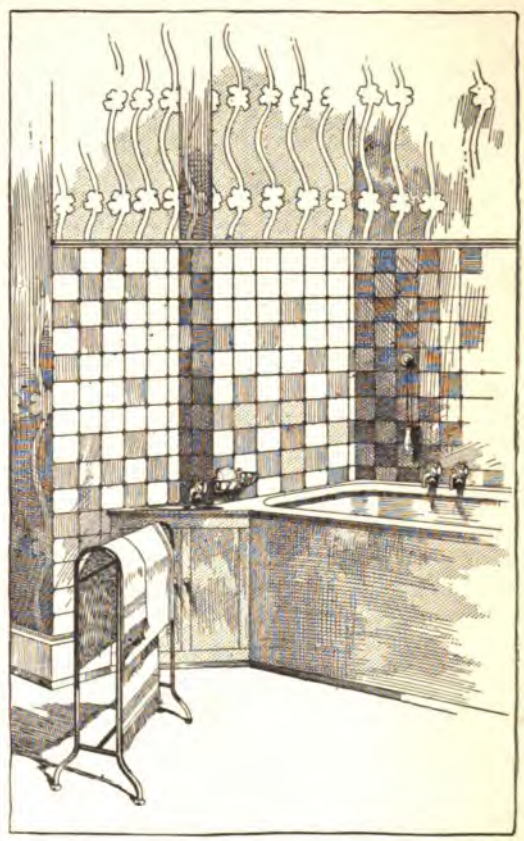
MORNING ROOM

Specially designed for "The Book of the Home" by S. J. Waring & Sons London



THE BATH-ROOM.

The bath-room should be, if possible, not less than eight feet wide and ten or eleven feet long, and should be situated where it is easily accessible from the bedrooms. The bath itself should be placed, together with a large, well-fitted lavatory basin, in a deep, tile-lined recess in one wall of the room. Convenient receptacles for soap and sponges should be contrived in the recess, and a bell placed within easy reach. This last detail is most important, though it is often overlooked.



53 A.—Bath and Lavatory Basin in Tile-lined Recess.

Another wall should be occupied by a fitment comprising two roomy cupboards through which the hot-water pipes are carried, a niche between these cupboards being fitted up as a toilet-table with a mirror. The shelves in the cupboards over the hot pipes should, of course, be latticed to assist the rapid and thorough airing of the linen placed on them.

Heating and Ventilating.—It is desirable that a bath-room should have a fireplace, not so much for heating purposes as for ventilation. If there is no fireplace there should be a circular ventilator in the top pane of the window. The hot-water tank, which is often hidden away in places where its valuable heat is absolutely wasted, should be placed, if possible, under one of the airing cupboards, and may perfectly well be fixed on the floor-level of the bath-room. The heating of a bath by a gas apparatus is never quite unobjectionable, and if this method be adopted care must be taken to provide a proper flue or pipe leading into the outer air to carry off the products of combustion.

Floor-covering.—If the floor of the bath-room is not tiled it may be ″ered either with linoleum or cork-carpet, plain or with a very neat and ›trusive mosaic or tile pattern. Cork-carpet is a little less cold to the

feet than linoleum, but the wear and cost of the two are practically equal. Matting—Indian, Chinese, or Japanese—fitted all over the room and bound with American cloth, always has a nice appearance, and wears none the worse for being occasionally wet.

Decoration.—As to the decorative treatment of the room, if there is a tiled alcove for the bath as suggested, the rest of the walls may be hung with any ordinary paper of graceful, simple design, and light soft colour. It should be of fairly good quality, however, as it must be varnished, otherwise the condensation on the walls of vapour from hot baths will be apt to spoil it very quickly. Plainly-painted walls are also liable to show streaks and spots where the condensed steam has trickled down them. Lincrusta, well painted, makes an admirable covering, either for the whole wall, or merely as a dado with a varnished paper above.

In the small type of room, where the bath occupies nearly all the available space, it is a decided advantage to have a tiled dado all round.

Furniture.—The furniture necessary is neither large in quantity nor expensive. Instead of the ordinary chair—generally taken from a bedroom suite—it is advisable to have a tolerably comfortable high-backed wide-seated one. A well-made wall-mirror, with drawer and shelf below, and a good-sized rush-topped footstool, are also desirable.

Bath Rugs and Mats.—The blue-and-white cotton Japanese rugs are in many ways suitable as bath-mats. They are pretty, clean-looking, cheap, and can be washed. The most practical kind of bath-mat is made of cork; the prettiest is an art-blanket embroidered with thick wool or rope flax; while between the two comes the Turkish towelling-mat with its gay stripes of red and blue.

Bath-room Details.—A screen is rarely found in a bath-room, yet it is a decidedly agreeable addition to the furniture. The most suitable kind, perhaps, is one with a wooden frame on which cretonne or sateen is fluted, but a more uncommon and effective screen has a bamboo frame, and panels of linen embroidered in flax-thread with a design of aquatic plants. If curtains are permitted, it is a pretty notion to make them of linen worked in the way suggested for the screen panels. They should be very simple, merely a width or two of material long enough to reach a bare half-inch below the lower sill, or edged all round with the narrowest of tufted binding.

If splash-curtains are required, either behind the lavatory basin or the bath, kus-kus matting, lincrusta, washing linen, and the finer sort of Japanese matting, are all suitable for the purpose; but flimsy hangings of art muslin, pongee silk, or cotton crêpe should be avoided.

SUGGESTIONS FOR BATH-ROOMS.

1. Dado of plain, pale-green tiles; paper with leaf-pa
a white ground above. White or deeper green
2. Dado of lincrusta painted ivory; bl

paint. Ivory Indian matting on floor, with blue-and-white Japanese rug over it.

3. Paper in shades of green; frieze with design of aquatic plants and reeds in soft tones of blue and green. Ivory paint. Green Japanese matting on floor, and blue-and-white rug.

4. Dado of white tiles; pink-and-white paper above; pale-green or white paint, and green cork-carpet.

5. Dado of anaglypta painted cream; deep-yellow paper above. Woodwork stained brown or painted cream, and brown linoleum.

THE KITCHEN.

A capable housewife is always careful to have the kitchen as well appointed in its way as the drawing-room, for the comfort of herself and of the household in general depends largely upon it, and she cannot expect to obtain and keep respectable servants unless she provides them with proper accommodation.

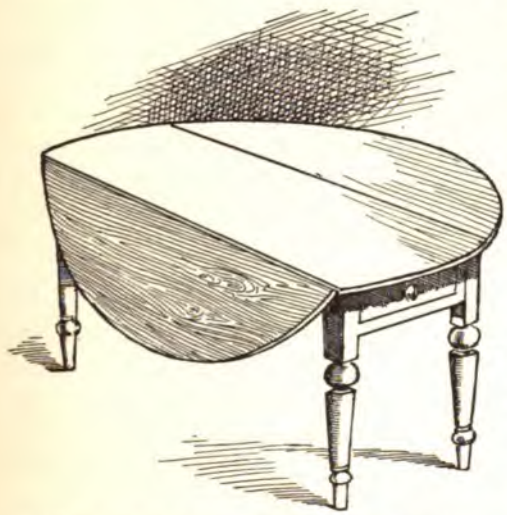


Fig. 54.—Small Round Table, with folding Leaves.

Kitchen Furniture.—Unfortunately, the kitchen is often so small that it will contain very little furniture beyond a table and a couple of chairs. When space has to be economized, a round table (fig. 54) with two leaves that can be folded down, thus reducing it to an oblong with rounded ends, is far better than the usual square or oblong shape. Such a table can seldom be obtained ready-made, but it can always be made to order. It should have at one end a drawer, in which the kitchen table-cloth, serviettes for dishing up fish, and other necessaries can be kept, the legs being stained and the top plain deal. It ought not to cost more than a pound.

The chairs should be of the ordinary Windsor pattern, the price of the best quality being about 3*s.* 6*d.* each. Even when the kitchen is of the very smallest size, an easy-chair should be provided. A folding camp-chair with Brussels-carpet seat and back, costing 3*s.* 6*d.*, will answer the purpose best, as it can be folded and stowed in a corner out of the way until the heavy work is accomplished and the kitchen tidied for the day. In houses where several servants are kept, there should be one Windsor chair for each servant and one or two over.

Floor-covering.—Most modern kitchens have boarded floors, for which the best covering is tile-pattern linoleum. The patent "inlaid" tile linoleum is the most economical in the long run; it lasts a lifetime and never gets shabby, as the pattern goes right through. The cost is from 3*s.* 6*d.* to 4*s.* a square yard. Thin oil-baize is nearly as expensive as linoleum, and speedily wears into holes. A large bright-coloured Kurd rug, costing from 6*s.* 6*d.*, should be provided, on condition that it is rolled up and put aside the last thing at night, and not laid down again until the dirty work is finished, the dinner cooked, and the kitchen tidied next day.

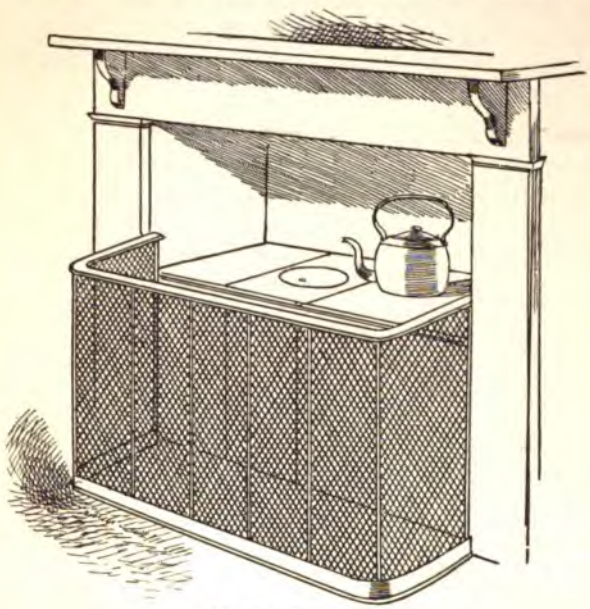


Fig. 55.—Fire-guard.

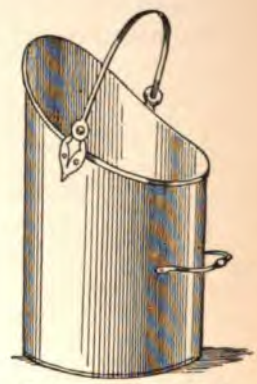


Fig. 56.—Upright Coal-hod.

Old-fashioned kitchens usually have stone floors, and these should be painted with Ben Trovato red, which prevents damp from rising. Two rugs will be needed; or a square of cocoa-fibre matting, neatly bound, can be laid down under the table, a hearth-rug being added to make the kitchen look cosy. Some mistresses prefer to have the floor covered with cocoa matting, but this is inadvisable unless the servants can be trusted to keep it in good order. Besides being one of the worst of dust-traps, it seems to possess a special faculty for attracting and absorbing stray grease-spots, with the result that, unless it is taken great care of, it very soon looks dirty and disreputable.

Kitchen Fender.—In a small kitchen a wire fire-guard about the height of the stove, with a steel or brass rod at the top (fig. 55), is better than the ordinary kitchen fender, for when the fire is hot the cook's print gown is liable to be scorched without some protection. The guard is also useful for airing linen when there is only a small fire. The price is from 9*s.* 6*d.* to 13*s.* according to size. In a fair-sized kitchen a steel fender will serve, the prices ranging from 4*s.* to 10*s.* 9*d.*

Strong fire-irons cost 3*s.* 9*d.* the set, consisting of poker, tongs, rake, and

shovel. An upright coal-hod, such as that shown in fig. 56, is better than a scoop, which is apt to tip over and scatter the coals. When made of plain galvanized iron it costs from 1*s.* 8*d.*; when Japanned black, from 1*s.* 11*d.*

Kitchen Clock, Curtains, and Sundries.—A good clock is an important item in the kitchen furniture, for if the cook has not a reliable time-keeper to refer to she cannot be expected to prepare the meals properly and serve them punctually. A strong American clock serves the purpose well. It should be of the portable kind, fitted with an alarum, so that the cook can take it to her room at night and set it for the hour of rising. Very cheap clocks should be avoided; it is better to pay rather a higher price for an article which can be trusted.

The kitchen window should always be prettily curtained, an easy matter in these days of cheap art-muslin. Reaching half-way up, there should be short curtains of figured art-muslin—at 1¾*d.* to 2¾*d.* the yard—stretched on a rod at top and bottom, and frilled at the centre edge, where they are drawn slightly apart. The effect is improved by the addition of a box-pleated valance of the same muslin across the top of the window.

A table-cloth of cheap art-serge or tapestry should also be provided, to be brought out with the rug when the kitchen is tidied. The oil-cloth covers sometimes used for kitchen tables soon blister and get shabby. While work is in progress the table should be bare; a good scrubbing with fine sand once or twice a week will keep it clean and white. A "picture" almanac, and two or three Christmas annual pictures should enliven the walls. These small extras—the rug, curtains, cloth, and pictures—cost very little, and are well worth the outlay, for a good servant heartily appreciates a cheery, homelike kitchen, and takes pride in keeping it nice.

Kitchen Utensils and Requisites.—It is unwise to have too large a stock of kitchen utensils in a small household; on the other hand, young people who are setting up housekeeping often go to the opposite extreme, and set aside a ridiculously inadequate sum for cooking and other utensils. At the same time the lists issued by house-furnishers generally include many articles that would be superfluous in a small household, while some necessary and serviceable things are omitted. The following list contains everything that is really necessary.

LIST OF REQUISITES.

	s.	*d.*
7 Sauce-pans	11	6
2 Kettles	5	2
1 Medium-size block-tin boiling-pot	2	1
1 Fish-kettle	2	11
1 Fish-slice	0	6
1 Frying-basket	1	5
1 Stew-pan for ditto	1	0
1 Frying-pan	0	11
1 Gridiron	1	1
1 Gravy-strainer	0	6½
1 Hair-sieve	0	6½

	s.	*d.*
1 Dover egg-whisk	0	5½
1 Colander	0	10½
1 Corkscrew	1	0
1 Tin-opener	0	4½
1 Mincing-machine	5	9
1 Meat-saw	1	3
1 Chopper	1	1
1 Set of skewers	0	9
2 Wire meat-covers— 1 large, 1*s.* 11*d.*; 1 small, 1*s.* 1*d.*	3	0
1 Toasting-fork	0	6

	s.	d.
1 Bread-grater	0	6
1 Bread-pan	1	6
1 Nutmeg-grater	0	1
1 Set scales	6	9
1 Chopping-board	1	3
1 Paste-board and pin	2	0
1 Flour-box...	1	6
1 Salt-box	0	8½
1 Knife-box	0	9½
1 Candle-box	0	10
1 Butter-print or pair of ball-cups	0	6½
1 Lemon-squeezer	0	4½
1 Flour-dredger	0	6
1 Pepper-box	0	3
1 Paste-jagger	0	5½
6 Paste-cutters	0	9
2 Tin moulds	3	0
1 Cake-tin	0	7½
2 Dozen assorted patty-pans ...	1	1
4 Tart-tins	1	0
1 Mustard-pot	0	6
1 Stone blanc-mange mould ...	1	1
1 Pestle and mortar	2	4
1 Cook's knife and fork	3	0
1 Vegetable-knife	0	6
1 Ladle	1	0
2 Iron spoons	0	6
2 Milk-basins with lips	1	0
4 Pudding-basins—various sizes...	1	3
3 Pie-dishes...	1	3
2 Milk-jugs...	1	0

	s.	d.
1 Set of three jugs...	1	3
1 Hot-water jug	1	0
2 Hot-water cans	2	2
4 Brown jars	2	0
1 Washing-bowl	1	0
6 Cups and saucers	1	6
12 Plates—various	1	6
3 Meat-dishes	1	6
3 Tumblers	0	6
1 Vegetable-dish	1	0
1 China cruet	0	10½
1 Tea-tray	1	0
1 Tea-pot	1	0
1 Coffee-pot...	1	3
6 Knives and forks	6	0
1 Kitchen towel-roller	0	7½
1 Set of irons, *i.e.* 2 Flat-irons at 7½*d.*, 1 Box-iron, 2*s.* 9*d.*, Stand, 6*d.*	4	6
1 Coal-hammer	0	9½
1 Cinder-sifter	1	6
1 Hair-broom	1	2
1 Bass-broom	1	6
1 Pail	1	6
1 Scrubbing-brush...	0	7½
2 Flue-brushes	1	9
1 Hearth-brush	0	9
1 Sauce-pan mop	0	6
Total ...	£5	19 4½

Sauce-pans.—The seven sauce-pans in the list should be in the following sizes:—Two of 5 quarts, one for soups and vegetables and the other for puddings, &c., price 2*s.* 4*d.* each, in cast-iron; one of 3 quarts, for potatoes, &c., price 1*s.* 5*d.*; one smaller for gravies, &c., price 10*d.*; one enamelled sauce-pan of 2 quarts, with lip, price 2*s.* 4*d.*; one smaller enamelled sauce-pan, 1*s.* 6*d.*; one egg sauce-pan, 9*d.*

If the cast-iron enamelled sauce-pans are considered too expensive, the light enamelled iron stew-pan—blue outside, white inside—will serve for delicate purposes, such as heating milk and making sauces, though they are less durable than the others. They cost from 8½*d.* to 2*s.* 3*d.* each according to size. The smallest holds 1 quart, the largest about 3 quarts. Tin sauce-pans should never be used; they soon wear out, and the handles are very liable to come off.

One of the secrets of successful cookery is the care of the sauce-pans. The enamelled ones must be kept entirely for milk, blanc-mange, macaroni, and delicate sauces, and should never have anything savoury cooked in them. Delicate vegetables, such as asparagus, artichokes, peas, and marrows, may be cooked in the large pudding sauce-pan, or in the smaller-sized one

set down as for potatoes; the second large sauce-pan must be reserved for soup, for anything containing onions, and for strong vegetables; the small gravy sauce-pan may also be used for onions.

Kettles.—Block-tin kettles heat more quickly than iron ones, and if a good quality is purchased are nearly as durable. The shape must largely depend on the cooking-stove. If a range is used, the largest kettle should have a well for fitting inside the ring (fig. 57); while for a gas-stove, there



Fig. 57.—Kettle, with Well, for Range.



Fig. 58.—Kettle, with corrugated bottom, for Gas Stove.

are special shallow kettles, oblong or round according to the shape of the burners, and with or without corrugated bottoms (fig. 58). Either kind is obtainable at practically the same price. One of the two kettles in the list is of block-tin, holding 3 quarts, price 3*s.* 6*d.*, and the other a small one of block-tin or cast-iron, price 1*s.* 8*d.*

Boiling-pot.—The block-tin boiling-pot is useful for a variety of purposes—for boiling large puddings or for making jam.

Preserving-kettle.—If much preserving is done at home a proper kettle should be used, costing from 3*s.* 9*d.* in enamelled iron and from 13*s.* 6*d.* in copper. This has not been included in the list, as in most small households the boiling-pot will serve the purpose equally well.

Fish-kettles.—The fish-kettle in the list is of planished tin, with strainer and slice. It is 13½ inches long, a size suitable for a small household. Larger kettles cost from 3*s.* 9*d.* to 10*s.* 6*d.* Small mackerel-kettles with handle and strainer cost from 2*s.* 11*d.* Turbot-kettles are only required in large establishments; they are made to the shape of the fish, and cost from 11*s.* 6*d.* to 21*s.*

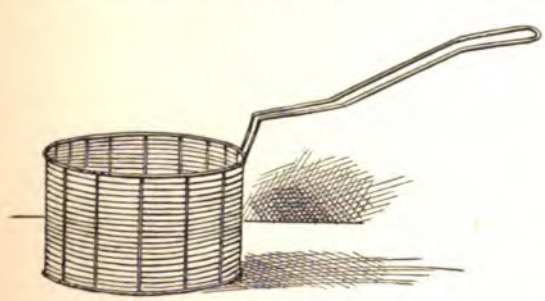


Fig. 59.—Frying-basket.

Frying Baskets and Pans.—A frying-basket (fig. 59) is a most desirable possession; it ensures easy and successful frying, and can be used equally well for small and filleted fish, rissoles, rice-balls—in fact, for almost

everything. If the fat used is of the proper degree of heat, there will be no transmission of flavours. Deep frying-pans fitted with baskets cost from 4*s.* 6*d.* each, but the cheap enamelled stew-pan mentioned in the list will serve the purpose well. The frying-basket measures 11 inches and the stew-pan 11½ inches. The ordinary shallow frying-pans are best in oval shape. Small omelet-pans of enamelled tin cost from 6½*d.* each, and should be kept for their special purpose.

Mincing-machine.—A mincing-machine (fig. 60) should be included in the most modest kitchen outfit. It is invaluable for cold-meat cookery, and its cost is soon saved, as by its means scraps of cold meat can be converted into savoury rissoles, potted-meat, and so forth.

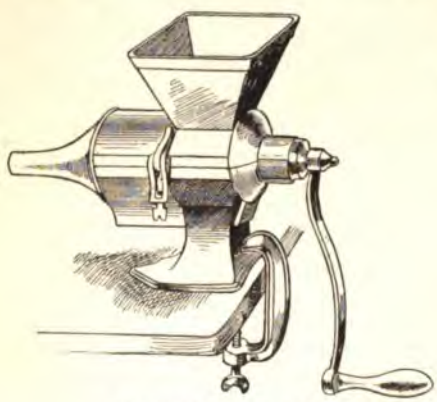


Fig. 60.—Mincing-machine.

Wire Meat-covers.—In a fair-sized larder wire meat-covers are better than the closed meat-safes, as they admit more air.



Fig. 61.—Butter-print.

Butter Prints and Cups.—These really come under the head of luxuries, but they are so inexpensive that no one need be without them. Tiny cups for making fancy balls of butter for the breakfast-table or for serving with cheese are the most economical.

Kitchen Crockery and Cutlery.—In addition to the basins, pie-dishes, &c., required for cookery, the servants should be allowed inexpensive crockery and cutlery for their own use. It is a sign of bad management on the part of the mistress when portions of her dinner and tea services are given out for kitchen use.

Irons.—If only the kitchen towels and dusters are washed at home, the box-iron included in the list will not be needed; the two flat-irons will be quite sufficient.

Kitchen Brooms and Brushes.—Those included in the list are solely for the cook's use in the kitchen and scullery. A complete list of housemaid's requisites is given under "The Pantry".

Kitchen Lamps.—Gas is the best illuminant for the kitchen, as a good, strong light is essential when there is cooking to be done; but if lamps are used, there should be two wall-lamps with metal receivers and strong reflectors, one fixed over the mantel-piece and the other wherever its light will be best diffused.

THE PANTRY.

The butler is a functionary who is seldom found in families of moderate means; but the butler's pantry is a very necessary apartment in a house where more than two servants are kept, and a desirable one in any case.

In a large household the pantry is the butler's sanctum, wherein he keeps the plate (of which he has the sole charge), the glass, the china, and such wine as has been brought from the cellar for immediate use. Therefore the fittings must include a safe, unless the plate is stored either in a heavy old-fashioned chest or in a strong-room, which is usually built so that access to it is obtained only through the butler's pantry. In an establishment large enough to require a strong-room there is usually a small, cool cellar, opening from the pantry, where the wine for immediate use is kept, but ordinarily a cupboard answers this purpose. The other fixtures are glass and china cupboards, a dresser, a sink with hot and cold water, and a fair-sized substantial table, on which the plate and lamps can be cleaned. A fixed desk, where the butler can make up and keep his account-books, is also convenient. The floor should be covered with cork carpet or inlaid-tile linoleum.

In a small household the pantry is in possession of the servant who has charge of the plate, glass, and china. In this case the strong-room or safe, the small wine-cellar, and the desk are not required, for the master of the house looks after the wine, the plate is handed over to the master or mistress every night, and the latter keeps the register of plate, glass, and china. But a china cupboard or closet, dresser, sink, and table are essential; also a cupboard for brooms and brushes; while glass-cloths, dusters, leathers, and furniture-sheets should be kept in the dresser drawers. A small cupboard under the sink is a useful receptacle for blacking and blacking-brushes, furniture-polish, plate-powder and brushes, whiting, and other indispensable articles.

Glass Closet.—The glass closet should, if possible, have glass doors, opening in the centre, as the contents can then be more easily seen. It should be large enough to hold all the reserve glass and china, and the mistress should keep the key, allowing only just a sufficient number of each article for daily use. Only in this way can she check breakages as they occur, for it obliges the maid to come to her for every glass, cup, or plate she requires.

Pantry Register.—A register of plate, glass, and china should be kept by the mistress, each item being entered under its proper heading, and breakages and replacements noted in it at the time they occur, while once or twice a year the mistress should check all the items with the maid. This plan is a wonderful deterrent to careless smashing, and the book is easily compiled in the first place, and is very little trouble to post up, provided the entries are made methodically and at the time. A shilling manuscript book with stiff cardboard covers answers the purpose admirably,

and will last for years. The plate should be counted every evening, by the mistress if possible, especially if she has young and unreliable servants.

Cleanliness.—The pantry must be kept scrupulously clean. Each time the sink is used it should be scrubbed down and sluiced, first with hot water and soda, then with cold water; the dresser and table should be scoured once a week, and the floor washed over twice a week.

SILVER.

Choice of Silver.—"The best is the cheapest" is a truism that applies particularly to silver plate. It is best for anyone with only a small amount of money to expend on plate to purchase a little and good, rather than full sets of inferior quality. Additions can then be made by degrees. Silver and the best plated goods are sold by the single article when required. The price varies of course; but, roughly, good electro-plate, of a quality that will last for years, costs from 35*s.* to 50*s.* per dozen for large forks and table-spoons; 26*s.* to 40*s.* per dozen for dessert forks and spoons, and soup-spoons that are an intermediate size between table and dessert spoons; and for smaller sizes in proportion.

Solid silver costs about three times as much as electro-plate if bought new; but it must be remembered that although good electro-plate will wear for twenty or thirty years, or even longer, solid silver not only lasts a life-time, but can be handed down to future generations. Moreover, the very best electro-plate always shines with a black lustre, never with the pure white lustre of silver. Even if the forks and spoons have to be of electro-plate, tea, salt, and mustard spoons should be of pure silver, and these are quite inexpensive nowadays.

The prices quoted above are for new silver or electro goods; but in London, and in any large towns, genuine silver articles are obtainable at good second-hand shops at very moderate prices, and in excellent condition. This is especially the case with table-spoons, tea, salt, and mustard spoons, sugar-tongs, and sifters, and oddments generally.

Heavily-ornamented forks and spoons, such as the old "Kings" and "Queens" patterns are no longer fashionable; they have, moreover, the disadvantage of being difficult to keep clean. The plain Old English, Fiddle pattern, and Queen Anne (rat's tail) are the neatest and the least expensive; while among modern patterns the Bead Old English, the Thread and Shell, the Threaded Fiddle, the Fiddle Shell End, the New Brunswick, the Coburg, and the New Edinboro' are all excellent and artistic designs. (See Plate XII.)

Silver, to clean.—Silver should always be washed in hot soapy water, a small sponge—not a flannel—being used if any rubbing is required, and the soap must be lathered in the water, not rubbed on the silver. Dry quickly on a soft linen cloth, and polish with a dry soft wash-leather. If the plate is rubbed with a soft wash-leather every day, a thorough cleaning once a fortnight may suffice. For this purpose mix pure whiting to a



PATTERNS OF SILVER SPOONS AND FORKS

1, Queen Anne; 2, Bead Antique; 3, Fiddle; 4, Shell Old English; 5, Plain Old English; 6, 7, Early English or Rat-tail; 8, Threaded and Shell; 9, Fiddle Threaded.

PHOTOGRAPH *FROM EXAMPLES* KINDLY LENT BY ELKINGTON & CO., LIMITED LONDON



thin paste with spirits of wine, whisky, or plain water. Wash and dry the silver as usual, then rub on the whiting, using a piece of soft flannelette in preference to flannel. When the whiting is dry, brush with a soft plate-brush and polish with fine dry wash-leather, which should be kept exclusively for the purpose. Always buy the best wash-leather for plate; the cheap kinds used for window-cleaning are not suitable. The older the leather gets the better it will polish.

Another way to clean silver is to dissolve a small handful of borax in a pan of hot water with a little soap, put the articles in, and let them remain for a few hours; then pour off the suds, rinse with clear cold water, and wipe with a soft cloth.

After a silver fork has been used for fish—especially anything strong-smelling, like herring—the odour often clings to the silver, even after washing. To prevent this, directly after the fork has been used wash it in warm water, and then stand it in a basin of tea-leaves for a few minutes. This will quite remove the smell.

Plate-powders.—An excellent plate-powder may be made by mixing one part of burnt hartshorn powder, one part of polisher's putty, and two parts of prepared chalk with spirits of wine or water as required. Finely-chased silver, such as delicate bon-bon dishes, should be cleaned with jeweller's rouge; but for all ordinary purposes the plain whiting, as described above, is best. The use of polishing-pastes and of most advertised plate-powders should be avoided, as they often contain ingredients of a gritty nature that scratch the surface of the silver.

Silver Ornaments, to clean.—Silver ornaments should be brushed with spirit of ammonia, washed in hot soapy water, dried first on an old linen rag, then in front of the fire until every vestige of moisture has evaporated, and lastly brushed with a soft plate-brush.

Stains, to remove.—Stains caused by egg, or vinegar, should be rubbed with a little salt. Medicine stains can be removed from silver by rubbing lightly with a lemon, and then washing it as usual in hot soapy water. For ink stains on silver apply a stiff paste made of chloride of lime and water—only, however, in the case of solid silver, as it injures plated goods.

Plate, to store.—Silver and plated goods that are not in everyday use must not be exposed to the air, or to the influence of gas. Clean and polish them, wrap each article in soft tissue-paper, and roll up in a strip of green baize.

GLASS AND CHINA.

Hints on Choosing.—Glass and china have never been prettier or more inexpensive than at present; and there is no excuse for anyone who allows thick inartistic china to be seen on the table. The best breakfast and tea services are of very thin white china, delicately hand-painted, every article slightly different. These are, of course, expensive; but the delicate white fluted china that is so popular is obtainable at extremely moderate prices. Strong colourings should always be avoided, whether in breakfast, tea, or

dinner services. It is impossible to give details of designs and prices, they are so numerous and varied; but very pretty tea and breakfast services of nice quality are obtainable from 12*s.*, while dinner-services in the excellent "semi-porcelain ware", that has a good surface, wears well, and does not chip or crack easily, cost from one guinea. The nicest glass is very thin and either cut or engraved. Coloured claret-glasses are obsolete, and claret-glasses match the tumblers and other wine-glasses.

China, to harden.—Glass and china of every description will last much longer if toughened or hardened when first bought. Wrap each piece up in a duster or soft rag, put it into a vessel of cold water, and heat it gradually. When the water has boiled for a few minutes, remove the vessel from the fire and let the things grow cold in the water. Treated in this manner they do not easily crack when hot liquids are poured into cups, jugs, or glasses, and the dinner plates and dishes are not so liable to split when made very hot.

China, to wash.—Add more hot water to that in which the silver has been washed, but no more soap; if much soap or soda is used, the china is apt to slip from the fingers and get broken. The china must be sorted first, all the cups, plates, and saucers being placed together. Never put two cups in the bowl together, or one of them is sure to get broken. Never wash greasy plates before the cups and saucers. If there are a great many things, do not wash them all before beginning to dry them; wash and dry a few at a time. If left to get nearly dry by themselves, they will be dull and sticky. Greasy plates and dishes, before being washed, should be scraped; or rubbed with a piece of newspaper, which can afterwards be burnt.

China Cement.—Dissolve half an ounce of gum-arabic in a wine-glass of boiling water, and stir in enough plaster-of-Paris to make a stiff paste. Apply the solution with a brush to the broken edges, which should be quite clean; fit them together, and let them dry. Another cement for china is made by slaking a cupful of freshly-burned lime with a very little boiling water, so that it falls into fine powder. Beat one yolk of an egg with a table-spoonful of cold water, add the powdered lime until a thin paste is formed, and apply at once, as it sets very quickly, using a brush as with the plaster-of-Paris cement. Either of these cements will set firmly, and withstand even boiling water.

Glass, to wash.—Glass after being washed in warm water with a tiny piece of soda or a few drops of liquid ammonia in it, but no soap, should be turned on to a tray to drain for a few seconds, then dried with a fine glass-cloth, and polished with a soft print rubber. Ordinary print, such as servants' dresses are made of, is the best polisher for table-glass, better than wash-leather; it must not, however, be used when new, but should be washed and boiled several times until it is quite soft. The rubber should be the size of an ordinary glass-cloth, hemmed at each end, and with a tape loop at one corner by which to hang it up.

Glasses should always be washed in a wooden bowl, which must be kept thoroughly clean, and never used for anything greasy.

Decanters and bottles that are stained inside may be cleaned with a mixture of vinegar and salt, rock-salt being best for the purpose. To a handful of salt allow a gill of vinegar; put both in the decanter and shake well until the stains have disappeared. Rinse well. Small bird-shot is excellent for removing stains from the inside of decanters or cruet casters. Put a handful of shot with a little water into the article to be cleaned; shake vigorously until the stain is removed; then empty, rinse, and drain.

Cut-glass dishes should be brushed with a small nail-brush kept for the purpose, which will prevent dirt from settling in the interstices.

Glass, to mend.—Dissolve half an ounce of isinglass in a small wine-glassful of spirits of wine, melting it by means of gentle heat. Paint the broken edges with this mixture, using a camel-hair brush; fit the pieces carefully together, tying in position if necessary with cotton or thin twine, and set in a cool place to dry.

Stoppers, to loosen.—Hold the neck of the bottle in hot water for a few minutes; then gently twist the stopper from left to right, holding the bottle with a duster, lest it should break and cut the hand. Another way is to drop a little sweet-oil round the stopper, hold it near the fire until thoroughly warm, and then twist gently. If it will not turn, tap it first on one side and then on the other, and it will soon become loose.

TABLE CUTLERY.

Choosing Cutlery.—With knives, as with forks and spoons, a low price is the reverse of economical, for the blades of cheap knives are always of soft steel that never gets a good edge, and the handles are of poor bone or composition, which soon discolours and splits. Ivory is an expensive luxury, and most people have to content themselves with bone or ivorine, but the blades should be of good Sheffield steel, and if possible supplied with the patent tang rivet or fastening, which never comes undone. A fair price for the best shear-steel knives with pure ivory balance handles and patent tang fastening is from 38*s.* to 48*s.* the dozen for table-knives, 30*s.* to 35*s.* the dozen for cheese-knives, and 12*s.* 6*d.* the pair for game or meat carvers. The same quality steel with bone or ivorine handles cost about 23*s.* 6*d.* the dozen, 17*s.* 6*d.* the dozen, and 6*s.* 6*d.* the pair respectively Without the tang fastenings the knives cost about 2*s.* 6*d.* the dozen less.

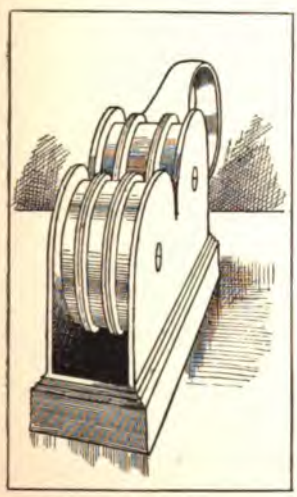


Fig. 62.—Knife-sharpener.

Handles, stained.—To remove stains from knife handles rub them with a wet flannel dipped in common salt. If the handles have become very

brown and discoloured, clean with a paste made of powdered burnt pumice-stone and water, and expose under glass to strong sunshine.

Handles, to fasten.—If the blade and handle of a knife have come apart, fill the groove in the handle with powdered resin, then heat the stock of the knife and force it into the handle. When cold it will be quite firm.

Knives, to sharpen.—The convenient revolving knife-sharpener (fig. 62), a little instrument provided with two steel cylinders with grooved edges, through which the knife is passed, has quite superseded the old-fashioned steel. It costs from 1*s.* 11*d.* to 3*s.* 6*d.*, according to size and quality.

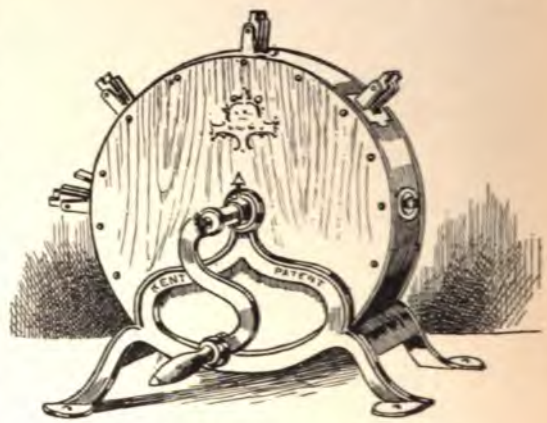


Fig. 63.—Kent's Knife-cleaning Machine for three Knives and Carver.

Knives, to clean.—In a large family a knife-cleaning machine (fig. 63) is a necessity, but in a small family a knife-board serves the purpose well, and does not wear out the knives, as the machines all do, more or less. Knives should be quite dry and clean before they are polished on the board. Wellington knife-polish is the best, but it must be supplemented with that rare commodity vulgarly known as elbow-grease, if a good result is to follow. Knives should not be washed unless they are greasy, but simply rubbed with a soft rag. If they are washed they must never be thrown into a bowl of hot water, as that ruins the handles. They should be put into hot water and soda, but only the blades should be immersed. After having been stirred about, they should be wiped with the dish-cloth and dried. The handles can be rubbed with a damp sponge, and a little soap when necessary.

BROOMS AND BRUSHES.

The pantry should be well supplied with brooms and brushes, for, if it is true that "bad work-people always complain of their tools", it is also true that work cannot be done properly and expeditiously without proper appliances. A well-trained maid takes a pride in her brooms and brushes, and is so careful with them that they last a long time, for she knows well enough that a half-worn brush is easier to manipulate and does its work better than a brand-new one. Brooms and brushes, like everything else that is meant for hard wear, should be of good quality, and they are far cheaper in the end, for low-priced ones are always coming to pieces, scattering hairs and bristles broadcast over the carpet and furniture.

Carpet-sweeper.—A carpet-sweeper is indispensable in a large house. It will outlast endless carpet-brooms; it does not injure the pile of the carpets, as an ordinary carpet-broom does, even when dexterously wielded; and it saves an immense amount of trouble, for it gathers the dust as it goes. The price, from 10*s.* 6*d.*, is not really expensive, for the Ewbank will last quite six times as long as an ordinary carpet-broom which costs 3*s.* to 3*s.* 6*d.* Hair brooms cost from 1*s.* to 5*s.* each, a good medium quality being 2*s.* to 2*s.* 6*d.*

Banister-brushes.—Banister and stair brushes are both single and double, with hair or bristles. The double one, shown in fig. 64, is much



Fig. 64.—Banister Brush.



Fig. 65.—"Turk's Head" Brush.

the best, with whisk one side and hair the other, the two meeting so that the wooden end of the brush is covered, and does not damage the paint on the staircase. A good medium quality costs 2*s.* 9*d.*

Wall-brushes.—There are two kinds of wall and ceiling brushes: the "Turk's Head" for walls only (fig. 65), and the double-ended brush that serves for both walls and ceilings (fig. 66). The "Turk's Head" costs from 3*s.* 6*d.* to 5*s.* 6*d.* with a twelve-foot tin-jointed handle, and the other from



Fig. 66.—Double-ended Brush for walls and ceilings.

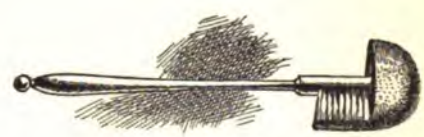


Fig. 67.—Curtain Broom.

4*s.* 6*d.* to 6*s.* with similar handle. Those with stronger brass-jointed handles cost from 1*s.* to 1*s.* 6*d.* more. Shorter handles are also obtainable, but they are not suitable for lofty rooms.

Curtain-brooms.—Brooms for sweeping curtains and draperies (fig. 67) are convenient, and save frequent taking down and shaking of thick curtains. They cost from 1*s.* 11*d.* each with plain handle, or from 4*s.* 6*d.* with brass telescope handle.

Furniture-brushes.—Furniture-brushes are absolutely necessary, even in small houses where such luxuries as wall and curtain sweepers are out of the question. The double-ended one (fig. 68, *b*) is best for ordinary use, as the end bristles penetrate odd corners well; but the brush with the handle (fig. 68, *a*) is best for brushing upholstered furniture. The prices are from 2*s.* 2*d.* each with soft bristles. Hard bristles scratch and tear the furniture.

Dusting Brushes.—Feather brushes are unnecessary evils in a house; they are not of the slightest use for dusting purposes, as they simply flirt the dust off one thing so that it settles on another; and the long-handled ones, if carelessly wielded, are responsible for many breakages of fragile ornaments. A hair dusting brush, something like a large paint-brush (see fig. 69), is much more useful. It fetches dust out of close corners and



Fig. 68. - Furniture Brushes.



Fig. 69.—Dusting Brush.

crannies as nothing else will, and is excellent also for lightly dusting down books. The price is from 6*d.* to 1*s.* 3*d.* A Venetian broom with long, soft hairs, mounted on a light bamboo handle (fig. 70), is invaluable for dusting Venetian blinds, cornices, or pictures. The price is from 1*s.* 9*d.*

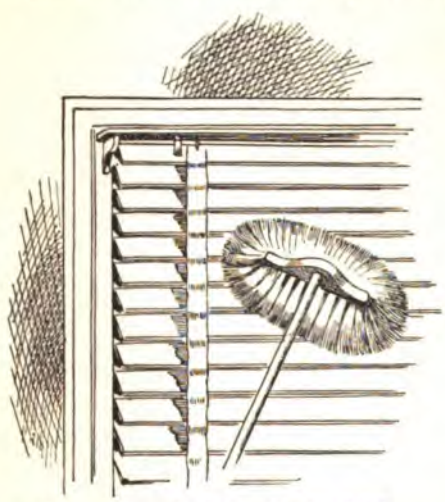


Fig. 70.—Broom for dusting Venetian Blinds, Cornices, or Pictures.



Fig. 71—Plate-brush.

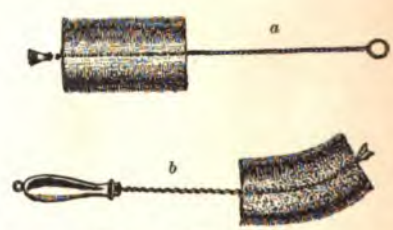


Fig. 72.—*a*, Bottle-brush; *b*, Decanter-brush.

Plate-brushes.—Plate-brushes (fig. 71) are of various sizes. At least two are required, a small hard one and a large soft one. Intermediate sizes may be wanted where there is a great deal of plate. The price is 9*d.* to 1*s.* 3*d.*, according to size.

Bottle-brushes.—Bottle and decanter brushes (fig. 72) are very useful in the pantry. Small ones for cleaning cruet casters, oil and vinegar cruses, cost 1½*d.* and 2½*d.* each; decanter-brushes, from 6*d.* to 1*s.*

Boot-brushes.—Boot-brushes are best bought by the set. The cost ranges from 2*s.* to 7*s.* 9*d.* the set according to quality. They should be kept in a wooden box. An ordinary soap-box with fixed lid serves the purpose admirably and holds blacking, polishing creams, and rubber as well.

Blacklead Brushes.—Brushes for grates must be kept in the housemaid's box A round blacklead brush and three polishing brushes will be required; the latter with hard, medium, and soft bristles. The round brush costs from 2*d.*, and the polishing brushes from 9*d.* each.

Scrubbing-brushes.—Scrubbing-brushes are of so many shapes and sizes that it is unnecessary to enumerate them, but the housemaid should have several at her disposal a large one with fibre—not bass—bristles for scrubbing floors, a smaller one of the same kind for shelves and tables, and a small stiff one for the sink. A long-handled brush is also necessary for scouring W.-C. pans; and a similar brush with hair bristles should be kept in the bath-room, to brush out the bath after it has been used.

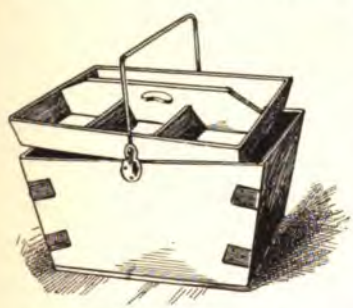


Fig. 73.—Housemaid's Box.

Housemaid's Box.—A housemaid's box with movable tray (fig. 73) costs from 1*s.* 10*d.* to 3*s.* 6*d.* according to size. It should contain her grate brushes, blacklead, polishing-paste, rubber and leather for fire-irons, wash-leather gloves, and, neatly folded on the top, the large coarse "sheet" that she lays down over the carpet when she is cleaning the grate.

Every brush should have its proper place. All except the shoe and grate and sink brushes, which are kept elsewhere, should be hung in the brush closet, each on its own nail. Brooms should be inverted and placed against the wall, the top of the handle resting on the floor. It ruins the best broom ever made to let it stand, when not in use, with the hair or bristles on the floor.

A step-ladder should be kept in the brush closet or in a corner of the pantry. It should be light enough to be easily carried about the house, but very strong and firm. A suitable one for this purpose, with eight treads, costs 10*s.* 6*d.*

THE STORE-CUPBOARD.

The storage of food is a matter which must engage the attention of every careful housewife. Much of the success of the cook's efforts depends upon the manner in which it is done. Almost all edibles are more or less affected by climatic changes, and some impart their odours to their surroundings. Many are particularly susceptible to damp, while others quickly absorb noxious vapours or gases.

It is obvious, therefore, that the store-room should be dry, cool, well

ventilated, and removed as far as possible from any tap, sink, or closet. The window should be covered with wire-gauze or perforated zinc, with the apertures sufficiently small to exclude insects. The various articles should be well insulated from each other, and kept in receptacles as nearly as possible air-tight, in order to prevent any mixture of flavours and deterioration by exhalation.

The fittings need not be either expensive or elaborate. The glass jars in which jams and pickles are sold and those in which French plums are imported into this country form convenient receptacles for sugar, raisins, currants, and peel. Stoneware jars are also useful; but glass jars have the advantage of showing the housekeeper at a glance the quantity they contain, thus not only saving time, but obviating the necessity of exposing the contents to the atmosphere by opening them for inspection. Tin biscuit-boxes may be used not only for their original purpose, but also for bread, cakes, arrowroot, corn-flour, soda, and starch, while preserved-meat cans, especially those of the larger size, holding about 6 lbs., should always find a place in the store-room. Spices should be kept well apart from each other, and well excluded from the air. When groceries arrive at the house, they should be turned out at once into their proper receptacles. Flour and oatmeal ought not to be kept in wooden bins or barrels, as is too often done, but in tinned or galvanized iron receptacles, which resist the attacks of mice and are impervious to damp.

In no department of the household are method and order more important than in the store-room. If possible, therefore, there must be plenty of space, together with sufficient shelving to afford a proper place for every receptacle fully exposed to view. There should be no "rear rank"; articles which are not seen are apt to be forgotten, and in any case they entail some time and trouble to get at.

Every jar, bin, and other receptacle should be distinctly labelled with the name of its contents; better still, the name should be painted on it, as labels frequently become detached. A set of scales and weights, and also measures of various capacities, are useful adjuncts. A flour scoop, made to hold exactly 1 lb., can be obtained at almost any ironmonger's for a few pence and is exceedingly convenient. No gas should be used in the store-room. There is always the chance of leakage, and in any case it vitiates the atmosphere when it is burned. Nor should an oil-lamp, or mineral oil in any form, be permitted in the vicinity of food, on account of the odour which it gives off. When artificial light is required, if the electric light is not available, a wax or composite candle is the only illuminant that should be employed.

Jams and jellies, in order to retain a firm consistency, should have the coolest situation, if possible near the window or ventilator. Articles in daily use should be conveniently placed so as to be readily accessible; and the larger bins will find their natural position on the floor. It is a good plan to have a smaller cupboard in which a week's provisions may be kept. The mistress can then give out every Saturday or Monday the

quantities that are likely to be wanted in the course of the week. She is thus able to ascertain when any extravagance or waste takes place. She can accurately gauge her housekeeping expenses from week to week, and exercise a watchful supervision over her expenditure.

In a large establishment it is advisable to keep an account-book in the store-room, for the purpose of entering the various items as they come in from the tradesmen and as they go out into the kitchen. In this manner the exact quantity of each class of goods that should be in stock becomes apparent.

For registering daily wants, a slate should be hung upon the wall. Among the miscellaneous articles which should find a place in the store-room, may be mentioned a paste-pot, a ball of twine, a pair of scissors, a hammer, some nails, pens and ink, and writing-paper.

THE LINEN CUPBOARD.

Though women are not called on now, as in olden times, to spin and weave every article of linen for the household use, yet a good housewife takes a real pride in providing an ample supply, and in seeing that all is of suitable quality, and kept in good order and spotless purity. Brides often bring a stock of house-linen as their contribution to the furnishing of the house, and, when this is the case, they must feel particular pleasure in caring for it.

A New Cupboard.—In every house a special place should be set aside for keeping the linen. A well-shelved cupboard is the best place, but if the builder has been unkind in this matter, a roomy, old-fashioned wardrobe is a good substitute, or even a set of book-shelves with a curtain before it. If these too are unavailable, choose a recess in an upper room, and have it fitted with shelves, being careful that they are wide and strong enough to hold such heavy things as spare blankets and counterpanes. Then get a carpenter to make two light wooden door-frames to fit the recess exactly, the outer rims only of wood, the inner panels of cretonne nailed or gummed on the wood. They should be provided with hinges, and should fasten by means of lock and key in the middle. Any carpenter will do the work for a few shillings, and the result will be a pretty and useful addition to the household furniture. Such a linen cupboard lasts for many years.

Linen List.—It goes without saying that the contents of the cupboard should be kept in the neatest and most orderly fashion. If a list of the articles is written out and tacked up inside the door of the cupboard, it will often be found useful. One easily forgets numbers, and in case servants prove careless or laundresses dishonest, it is well to have unmistakable proof of how many articles of a kind there should be. Of course such a list needs constant revision, as old articles wear out and new ones are added. A mistress should know, too, how many sheets and table-cloths are in use,

and how many have gone to the wash; otherwise, uncomfortable discussions will arise with the servants, and sometimes they may be unjustly blamed. On the other hand, articles may vanish without the mistress's being able to trace them.

Marking Linen.—It is a wise plan to have some distinctive methods of marking the household linen. In times of illness or household confusion, strange servants or nurses, when sent to the linen cupboard, often show a talent for fetching the wrong article, and the spirit of a thrifty housewife is vexed by seeing her best table-cloths used for the servants' table, or large-sized sheets sweeping the floor around small beds. To avoid such calamities, it is well to mark all reserve linen or best linen with a device different from the everyday mark—say, with a monogram, or anything that can be easily described and recognized. If separate sheets and blankets are kept for separate rooms, let them have their distinctive badge also. Suppose a certain colour is chosen for each room, the respective sheets, pillow-cases, and towels may have the family initials embroidered on them in the various colours. Or, if white lettering is preferred, let the white-worked letters be lightly and daintily outlined with the chosen colours. This is a foreign method of marking, and very pretty (see also "Laundry", vol. ii.).

Quantity needed.—The contents of a linen cupboard must vary in quantity according to the size of the family and the number of rooms in the house. For a family of six, consisting of husband, wife, two children, and two servants, the number of articles found in the following list will prove serviceable. The prices are attached to each article as a guide for would-be buyers; they are given from actual experience, and have also been compared with the lists of two leading manufacturers. Of course the state of the wool and cotton markets will sometimes make a difference in different years. The house for which these quantities are provided is supposed to contain four bedrooms, one of them a guest-room. Three blankets are allotted to each bed, and four spare ones are to be kept in reserve for cold nights or extra-chilly people.

SHEETS, &c.

	£	*s.*	*d.*
3 Best pairs of sheets, at £1, 1*s.* a pair	3	3	0
6 Good pairs of sheets, at 12*s.* 6*d.* a pair	3	15	0
3 Servants' pairs of sheets, at 5*s.* a pair	0	15	0
3 Best pairs of pillow-cases, at 3*s.* a pair	0	9	0
4 Good pairs of pillow-cases, at 2*s.* a pair	0	8	0
3 Pairs of servants' pillow-cases, at 1*s.* 6*d.* a pair ...	0	4	6
4 Extra fine diaper towels, at 2*s.* 6*d.* each	0	10	0
12 Turkish towels, at 2*s.* each	1	4	0
12 Ordinary huckaback towels, at 9*s.* a dozen	0	9	0
6 Servants' towels, at 6*s.* 6*d.* a dozen	0	3	3
3 Round towels, three yards long, at 4*d.* a yard ...	0	3	0
Total	11	3	9

BLANKETS.

	£	s.	d.
4 Under blankets, at 12s. a pair	1	4	0
2 Servants' blankets, at 14s. a pair	0	14	0
4 Best blankets, at 42s. a pair	4	4	0
6 Good blankets, at 37s. 6d. a pair	5	12	6
Total, ...	11	14	6

TABLE-CLOTHS, &c.

	£	s.	d.
1 Best table-cloth, 3½ yards long	1	1	0
1 Best table-cloth, 2½ yards long	0	18	0
6 Good table-cloths, at 8s. 6d. each	2	11	0
3 Servants' table-cloths, at 2s. each	0	6	0
12 Best napkins, at 1s. 6d. each	0	18	0
12 Good napkins, at 1s. each	0	12	0
6 Glass-cloths, at 6d. each	0	3	0
12 Tea-cloths, at 6s. 3d. per dozen	0	6	3
12 Dusters, at 2s. per dozen	0	2	0
6 Chamber-cloths, at 6s. per dozen	0	3	0
3 Pudding-cloths, at 4d. each	0	1	0
Total	7	1	3

Total amount spent on House-linen	29	19	6

New Linen from Old.—This list is given for the benefit of those setting up in housekeeping. When once the household is started, it will be unnecessary to purchase several of the articles here named. Table-cloths as they wear may be cut down into tray-cloths, or even into napkins for everyday use. Old towels and calico sheets will furnish an endless supply of glass-cloths and chamber-cloths. Dusters can be made from old chintz hangings, muslin curtains, &c. No piece of linen should ever be thrown away. When quite done with for household use, it should be put, neatly folded, in the hospital drawer, which exists in most households. Thence it will usefully reappear when dressing for a wound, burn, or cut is needed. Thrift is a leading virtue in a housewife, and by the skilful handling of odds and ends a careful manager delights to make her home comfortable without fresh outlay. (See also "Household Economy", vol. ii.)

A Small Stock Best.—The above list may seem to some to furnish a small stock of house-linen, but all modern life is opposed to the storing up of large quantities after the habit of our grandmothers. Space is small in modern houses, time and trouble are involved in the care of many things, and even in house-linen fashion alters; so that it is nice to be able to buy new things without feeling that this is extravagant because the stock is large already.

Origin of Linen.—Some knowledge of the materials employed and the process of manufacture will aid in choosing the contents of the linen cupboard. The vegetable kingdom furnishes both linen and cotton. The latter has

been employed for domestic purposes only in recent times, since the increased commerce of our country opened up the supplies of America and India for our use. Even down to the beginning of this century cotton sheets and underclothing were looked on with disfavour. Linen, on the other hand, is one of the oldest articles of domestic use in the world. All Bible students know the frequent allusions made in that book to "fine linen, clean and white". Pharaoh arrayed Joseph in "fine linen" as a mark of honour; the culture of the flax-plant in Egypt goes back to prehistoric times. The Egyptian priests were called "linen wearing" by Ovid, and mummies are found wrapped in cerements wrought, as the microscope shows, from flax.

The flax-plant (fig. 74) grows about 2 feet high, and bears smooth leaves and blue flowers; from the fibres of the stem the flax of commerce is derived. These fibres are first soaked in water to get rid of the outer bark, then beaten and combed (scutching and heckling, the process is called) to separate the woody particles. Next the fibres are carded repeatedly, so as to draw them out into bands of equal thickness and smoothness. Smoothness is the great characteristic of the linen fibres, and one by which they are always recognizable. Flax can be drawn out into threads of almost inconceivable fineness. A cambric of superior quality sometimes contains as many as 60,000 yards of thread to a pound.



Fig. 74.—The Flax-plant (*Linum usitatissimum*).

Various Kinds of Linen.—The fineness of the yarn determines to what use it will be put. The coarser kinds of flax are spun into ticking, huckaback, drills, and towelling; Barnsley is a great centre for this kind of manufacture. At Dundee a less coarse kind is employed for making sheetings. Damasks and diapers for table-linen and face-towels are produced from a yet finer quality, Dunfermline and Belfast being the chief seats of this trade. The prudent housewife will note these names, because articles may sometimes be obtained both better and cheaper by sending direct to the place of manufacture than by buying at a draper's.

Damasks and diapers differ from linen sheetings in their finer texture and in having a pattern. The designs are introduced during the weaving process, and are therefore as durable as the fabric itself. Diaper is almost identical with damask, except that the pattern is smaller. Damask table-cloths and napkins often show great beauty both of quality and design. A housewife should not grudge spending what may seem a high sum upon her best table-cloths, since nothing sets off a table so much as snowy-white glossy cloths of elegant pattern. Good linen also lasts long, if properly washed and taken care of.

In choosing linen great regard should be paid to the closeness and regularity of weaving. A smooth surface is not the only guide, for this may be produced by pressing and starching. A false whiteness, too, is often given by the use of flour. When a fabric on being handled lets fall a cloud of dust, suspect it at once as inferior. Test the material by doubling it between the finger and thumb and holding it to the light to see the texture. Cheap articles are sometimes made from a mixture of linen and cotton; such mixtures do not wear well. In fact, with house-linen required for long service, cheapness is seldom economy.

For kitchen use, table-cloths and towels of coarse, unbleached flax or hemp answer admirably. They are strong, and will bear the somewhat rough handling they are sure to get, and they do not soil as quickly as the



Fig. 75.—Linen Fibres, as seen under the microscope.

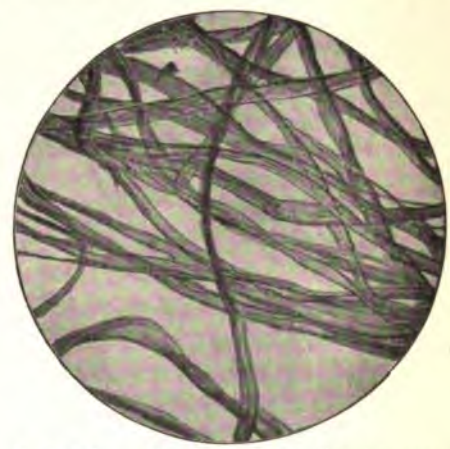


Fig. 76.—Cotton Fibres, as seen under the microscope.

(Both magnified about 170 diameters.)

finer and whiter kinds. All table-cloths on being removed from the table should be carefully put in a press, or else laid flat in a sufficiently large drawer. Napkins must be neatly and tightly folded. A little attention not only keeps the linen in use much longer clean, but also contributes to its wearing evenly and well.

Linen Cold, Cotton Warm.—Linen sheets are not used so much now as formerly. They wear longer and remain whiter than any other, but for winter use they are very cold. Under a microscope linen threads (fig. 75) are seen to be quite smooth and round, while the fibres of cotton (fig. 76) are woolly and hooked. The former therefore allow the warmth to escape through them; the latter retain it. Twilled or plain calico sheets are therefore advisable for winter use, and the flannelette or cosy cotton sheeting recently offered to the public forms a luxury for persons who feel the cold. Linen sheets may be reserved for summer use, or for show. On their even, distinct threads it is easy to work a monogram, or a border for the turned-down portion of the sheet; and these bits of dainty needlework much to the elegance in a house.

Origin of Cotton.—Cotton is obtained from the woolly coverings enveloping the seeds of several plants belonging to the mallow tribe, all of them bearing capsules (fig. 77), in which the seeds lie embedded in a white or yellowish down. The best cotton comes from North America; its fibres possess the greatest length, strength, and fineness. West India cotton is very good, but the cotton from Pernambuco is inferior, though sent to England in large quantities.

A very high temperature is necessary to produce good cotton, and the same plants, if grown a little farther north than a certain latitude, yield an inferior quality of down.



Fig. 77.—Capsule of Cotton-plant (*Gossypium herbaceum*).

Though in Europe this manufacture is comparatively modern, the inhabitants of China and India have dressed themselves in cottons and muslins for at least three thousand years. Fine cottons of Indian production were imported to ancient Rome, and the Moors introduced both the culture of cotton and its weaving into Spain in the tenth century. From that country the art passed to Italy and thence to Flanders; and Protestant refugees from the cruel persecutions in the Netherlands brought the manufacture into England about the sixteenth century. Cotton weaving has been a series of triumphs of human ingenuity. Arkwright, Watt, Crompton, and others perfected the instruments employed, till now "the strong, ever-moving iron arms of the machines will work any pattern you select, and in as many colours as you choose, and do all with velocity, dexterity, and skill; and with the speed of true human creation a raw material, originally as cheap as thistle-down, into endless useful and beautiful fabrics." (Professor George Wilson).

Tests of Quality.—In cotton, as in linen, the tests of quality are the [illegible] of the woven threads and their freedom from knots. A long woven cotton is seldom a good one, though the widest woven calicoes are of course only appropriate for bedding. The finer sorts of cotton are bleached to a beautiful whiteness, but the bleaching is considered to lessen the strength of the material. A good well-woven unbleached cotton is very suitable for servants' and children's beds. It washes perfectly white, and is warmer than the bleached cotton. Both bleached and unbleached cotton, the best, often contain an undue quantity of what is termed "dress," that is starch or flour added to improve the appearance. Such cotton is wet and boiled, and water is provided.

Cotton in the Home.—Cotton may be purchased ready-made, or bought in the yard and made up at home. It is the best material for underclothing, for bed-linen, and for many articles of household use. In the latter case the material is likely to be of better quality.

In making [illegible] it might have been remarked that

these too may be procured by the yard; they will come cheaper so, and for everyday use will answer very well. But the pattern in this case necessarily is not continued at the two ends, so for better occasions, when beauty is an object, the table-cloths woven in one, of distinct and symmetrical design, must be preferred.

Wear and Repair.—When sheets begin to wear it is usually in the middle. Before thin places become holes, sew the two sides together, and slit the sheet up the middle and hem it to form fresh sides. When the sheet again needs repair, sew the top and bottom together and slit it across the centre and hem. After this process has been followed, a sheet may be fairly said to have served its time, and out of the fragments that remain china-cloths, &c., may be made.

Some careless laundresses are given to pinning, and, consequently, tearing, the corners of the sheets. When this has been done once or twice, the result is a ragged corner, which no mending can make really nice again. As a preventive, a little piece of broad strong tape may be sewn for two inches or more round each corner. It should be laid flat on the material, and the inside edges hemmed, care being taken to make it set neatly.

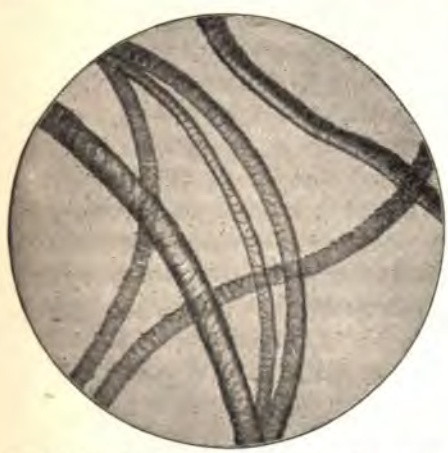


Fig. 78.—Wool Fibres, as seen under the microscope. (Magnified about 170 diameters.)

For darning linen sheets and cloths linen thread should be used; the flax thread, or flourishing thread, so much sold for embroidery purposes, answers well. It mixes with the material much better than the ordinary darning cotton. (See also "Darning" and "Mending", vol. iii.)

Blankets, their Origin.—Blankets are among the most valuable contents of the linen cupboard, and should therefore be selected and treated with great care. They are made, as everyone knows, from the wool of the sheep. This animal, under favourable circumstances, produces fine, soft, short hairs, which mat closely together, forming a warm, compact material. In our climate the sheep does not develop this hair sufficiently fine, and the best wool comes from warmer countries—Spain, Saxony, and Australia. The filaments of wool, when viewed under the microscope (fig. 78), appear covered with scales, which, in the process of weaving, cling closely to each other like hooks. The more closely these fibres intertwine, the firmer and warmer is the material produced.

Blankets have been long manufactured in England; the chief seats of the trade are Dewsbury, Wakefield, and Witney.

Tests of Quality.—Wool in its raw state contains a great deal of animal grease and brown colouring matter, and the getting rid of them is

one of the chief processes in its manufacture. This makes bleaching a necessity for wool.

In the choice of blankets touch is a great guide. A good blanket should have a soft, full, silky feel under the hand—any harshness implies a mixture of cotton—and should not be thin or coarsely woven. Blankets in their manufacture are treated somewhat differently from flannels. After weaving, a roller studded with brass pins is passed over the surface of blankets to draw out and raise the woolly fibres. This process makes the fibres much softer and warmer, and also affords a test as to quality. If the surface fibres are so closely interwoven that it is not easy to pull them out, and if, when pulled out, they show considerable length, the blanket is made from long-fibred wool and is of good quality. But if these hairs are short and break off readily, the blanket has been badly woven from short, inferior wool. By holding the fabric to the light one may also form an idea of the style of weaving.

Protection from Moths.—Some housekeepers prefer red blankets, as the alum, which is generally employed to fix the red dye, is considered a preventive against moths. These insect pests are much to be dreaded in connection with store blankets, and no adequate cure for them has yet been found. Insect-powder strewn between the folds may be tried, and may prove effectual, or the blankets may be wrapped in newspapers, as the smell of printers' ink is said to be objectionable to the little creatures; but the best remedy is to leave nothing woollen lying undisturbed too long. Every few weeks take the store blankets out, shake and examine them, and then put them by with the above preventives, or with camphor; that is all that can be done.

Gray blankets are said to be very attractive to moths, perhaps from that strange instinct in the insect-world which makes them quick to discover any means of concealment. A gray moth on a gray blanket is well hidden.

Perfume Useful.—A linen-cupboard, when neatly kept, is one of the pleasantest places in a house. Our ancestresses' plan of strewing bags of dried rose-leaves, lavender, and verbena about the shelves gave a delicious fragrance to sheets and pillow-cases.

THE FURNISHING OF FLATS.

Flats are becoming increasingly popular with the dwellers in our great cities. The fact that rates and taxes are usually included in the rent is regarded by many as an important consideration in comparing the relative merits of flats and houses. Moreover, while away for a holiday the tenant can lock up his flat and feel that it is perfectly safe, especially when there is a care-taker or hall-porter. But, unless very expensive, flats

are apt to be cramped, every inch of space being used for a room of some kind, with nothing in the way of hall, cupboards, or box-room. The rooms themselves are often small, and for this reason clever fitments are by far the best kind of furniture. However, as flats differ slightly in different parts of the country, it may be as well to say that this article is written with special reference to London.

A MODERATE-SIZED FLAT.

The plan (fig. 79) will show the position of the rooms in a fair-sized flat. This, of course, is only one plan out of many, but in almost every case there is the same disadvantage—want of light in the hall. The front-door opens on to the staircase, and its glass panels are the only means of admitting light to the long dark passage, unless there are ground-glass panels in the doors of the kitchen and bath-room, and clear-glass fan-lights above those of the other rooms, a not unusual arrangement. The sitting-rooms are fair-sized, but the servant's bedroom is a mere slip.

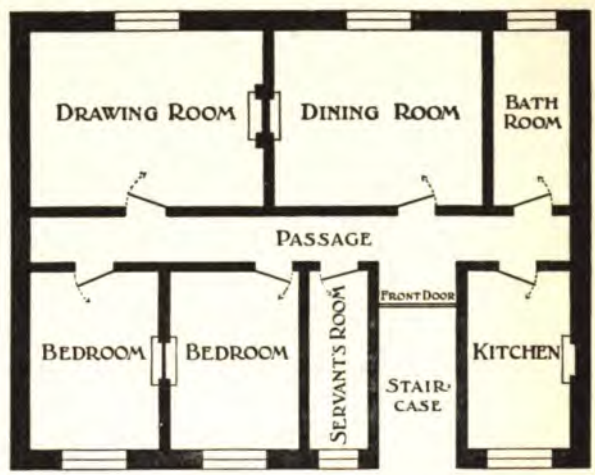


Fig. 79.—Plan of a moderate-sized London Flat.

Dining-room. — In the dining-room the walls should be either painted, or else covered with an almost plain paper of the palest Indian-red, the wood-work being painted a darker shade of the same colour. The furniture should be of dark oak, as this tone can be copied by means of judicious staining on fitments made of deal. Six small chairs will be required; with plain or slightly-carved frames and rush-seats they may be bought for 14*s.* 6*d.* each. Two comfortable arm-chairs for the fireside, covered with tapestry, will cost 45*s.* each, and a good dining-table about £4. A writing-table with a high chair in front will go before the window, and a bench (fig. 80) on each side of it. These can be made in the following manner. Procure two deal boxes, 12 inches high, 16 inches wide, and 3 feet 6 inches long, and to the back of each screw a square frame of strong deal laths 4 inches wide, forming a sort of Oxford frame. If anaglypta panels of a bold design are fastened on the front of each box, they will have the effect of carving. The boxes and frames must then be sized and stained the colour of dark oak, and a panel of tapestry (a red fleur-de-lis design on a "string" ground would be effective) must be nailed to the Oxford frames



Fig. 80.—Home-made Bench for side of Dining-room Window.

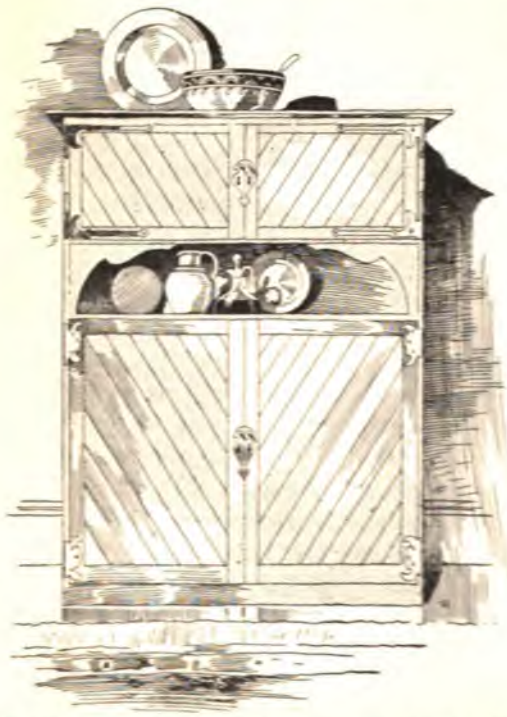


Fig. 81.—Cupboard Fitment for Dining-room (Fireplace Recess).

with copper studs, and a mattress covered with the same placed on the box lids to form seats.

As there will certainly be no linen-press in the flat, a cupboard for the purpose must be constructed in a fireplace recess. This may sound somewhat extraordinary, but dwellers in flats are compelled to resort to many contrivances of the sort. The cupboard (fig. 81) must be a double one, the lower part being used for heavy things, such as sheets, table-cloths, and towels, while pillow-slips, fancy cloths, serviettes, and doyleys can be put in the cupboard above. One cupboard should be placed above the other, but a space of about a foot must be allowed between, the sides being connected by curved brackets. The top of the lower cupboard can be used for a display of silver and china, such as one sees on sideboards. A similar cupboard in the other recess can be used for glass and china, and a small dinner-wagon will then complete all the furniture necessary for the room. The cupboard fitments can be made of deal, stained oak and ornamented with quaint iron fittings.

Drawing-room. — The drawing-room will not want many fitments, because, except for chairs and small tables, it must be left as clear as possible, being the chief room used for entertaining. For this reason it is best to dispense with cabinets and what-nots, and to use the fireplace



Fig. 82.—Home-made Escritoire.

recesses and the other two corners of the room for the display of china and books. The walls might be yellow and the wood-work white, with which melon-green draperies and chair-seats would form an admirable combination. It is possible to buy for £6, 6*s*. a delightful little suite in dark-stained mahogany with pale-green brocade seats, comprising a settee, two arm-chairs, and four small chairs; and two green-stained wicker chairs upholstered in green-and-gold velvet could be obtained for 30*s*. each. With a long low box ottoman covered with gold damask for the front of the window, there would be sitting accommodation for twelve persons, as many as the room would hold. The box ottoman would serve as a useful receptacle, and if there were a piano in the room, a similar but higher ottoman for the seat would contain all the music, both loose and bound. Three little tables at 10*s*. 6*d*. each would be wanted, and also a bamboo table with flaps, price 8*s*. 6*d*., which could be used for tea.

In one of the recesses by the fireplace there might be a writing fitment (fig. 82). This is made by fixing to the wall three narrow shelves above and one broad one below, the last supported by two legs



Fig. 83.—Fitment for Corner of Drawing-room.

in front. Between the top and second shelf there is room for a row of books, and on the front of the second shelf there should be a brass rod holding a curtain of yellow silk which will fall to the third shelf, on which papers can be kept. Between the third and fourth shelf (which is the broad one to be used as a desk) there should be small compartments for stationery. The other recess may be filled with a panel of looking-glass, with a drapery of silk round the top and sides; the reflection from the glass will almost give the effect of a second room beyond.

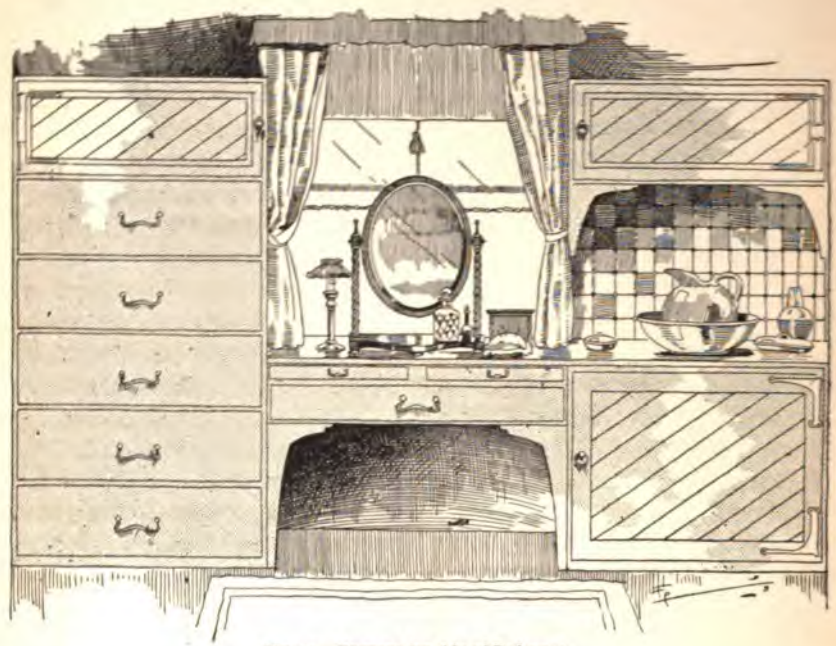


Fig. 84.—Fitment for side of Bedroom.

If across each angle of the wall opposite the fireplace (fig. 83) three shelves were fixed, a lamp with a large shade and an art-pot for ferns might be placed on the top shelf, books on the second, and china on the third. From this to the ground there should be a curtain of silk, if the space behind was wanted for storage; if not, it might be left open, and filled up with tall china jars or bowls containing ferns. All these fitments should be enamelled white.

Bedrooms.—The bed should be placed with its foot to the fireplace, and a corner wardrobe with curtains (price 28*s.*) at each angle of the wall in which there is a door. The fitment shown in fig. 84 occupies the whole width of the room. On the left side, reaching from the end of the window to the wall, there are five drawers, and a bonnet cupboard at the top. On the right there is one long shelf, which is to be used for toilet-table and wash-stand. Beneath the part which holds the toilet-glass there are two small drawers and one big one, and beneath the wash-stand portion

there is a cupboard. The recess behind the washing-basin should if possible be tiled, and there should be a cupboard above for medicine-bottles and similar articles. All this fitment may be made of deal, and stained green, oak, or mahogany, or enamelled white. A salmon-pink room with green fitment and copper fittings would afford an admirable combination, especially if the bedstead was of green wood. A similar fitment could be used in the second bedroom, with one corner wardrobe in the angle; the wardrobe might be stained oak and the walls pale-blue.

Passage.—The long passage will not be wide enough for any furniture other than a few hanging-pegs for coats and hats and a china "pipe" for umbrellas, but the end part might be cut off at the door of the last bedroom by a curtain, the space behind it being utilized for boxes, the big ones on the ground and the light portmanteaus and travelling-bags on a shelf above.

A SMALL FLAT.

The second type of flat (fig. 85) is much more circumscribed, and only fit for a single person, or a young couple content with a servant who comes in only for the day, there being no room for her to sleep in unless they can manage with one sitting-room, an arrangement to be avoided if possible. At the same time the rents of these small flats are low, and with a little taste they may be made extremely pretty in a modest way. Though the outlook is often not inviting, the windows may be veiled with drapery, provided that the rooms are sufficiently well-lighted to allow it.

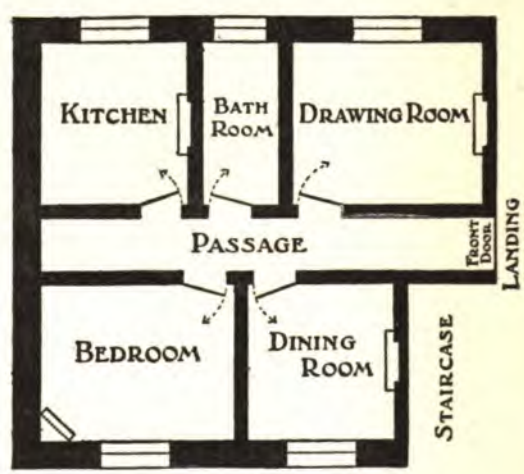


Fig. 85.—Plan of small London Flat.

On the assumption that the occupants of such a flat would not have large means, most of the decorations and fitments suggested will be home-made. It is wonderful what may be accomplished with hammer, nails, and a glue-pot.

Dining-room.—In the dining-room have the walls coloured pale-green and the wood-work painted a deeper and warmer shade of the same colour. Four polished-wood chairs of dark mahogany tint can be bought for 6*s.* 6*d.* each, and two rush-seated arm-chairs with dark mahogany frames for 10*s.* 6*d.* each. These, with a table for £1, a square of Indian-red art-carpet for 9*s.*, curtains and fireplace drapery of red art-serge for 12*s.*, and fender and fire-irons for 5*s.*, would complete all the furniture to be bought for this room, the total cost being about £5, a small margin being allowed for short

window-blinds of red-and-white muslin, and two or three mantel-piece ornaments.

To make the fitments required in this room, six "egg-boxes" must be procured from a grocer, and some lengths of deal planking, not too thick, from a carpenter. The recess farthest from the window must be used for the sideboard (fig. 86). Place here three of the egg-boxes on end, side by side, facing the room. Each should have a shelf in the middle, thus making six partitions, and the interior should be made as smooth as possible and papered. The boxes must be securely screwed together, have boarding glued and nailed to the top, and be planed and sand-papered to form an absolutely smooth surface. The outside should be sized, and finally stained dark-brown. If a thin brass rod is suspended on two little brackets fixed to the corners in front, two curtains of red art-serge can be hung from it to the ground. A fourth egg-box must be fixed to the wall with its longer sides parallel to the top of the others and about 18 inches above them. It should be covered, stained, and curtained like them. If greater strength is desired, it can be attached to them by means of upright supports. The tops of both fitments may be decorated with china or silver. It will be found that a quite surprising quantity of groceries, wine, glass, and china may be stored away inside.

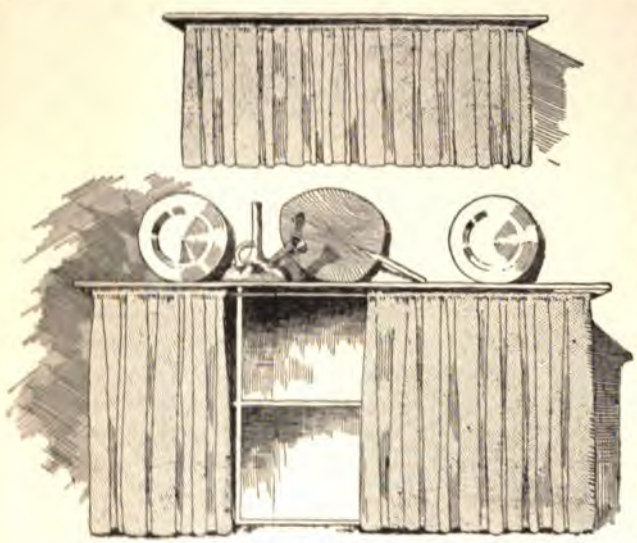


Fig. 86.—Sideboard Fitment for Dining-room of Small Flat.

The other recess nearer the light should be used as an escritoire and bookcase (fig. 87). Set two egg-boxes on end about 18 inches apart, and screw over them some boarding to form a table, the division between the boxes serving for the knee-hole. In one of the boxes there can be three shelves, the partitions being used for small papers and stationery; in the other, one shelf would be enough for larger papers. The boxes should be stained dark-brown, and provided with the curtains of red serge like the others. Above the desk portion, two or three shelves should be fitted into the recess for holding books. This would equip the tiny dining-room with everything useful, without going to much expense or taking up much space.

Drawing-room.—The drawing-room, as will be seen from the plan, is somewhat larger than the dining-room. The walls here should be distempered turquoise-blue and the wood-work should be painted white.

Again, as the outlook will probably be uninviting, there should be two thin rods fixed across the window-frame, one at the top and one at the bottom, and two blinds of yellow-and-white muslin gathered on to the rods, thus quite covering the window without in any way preventing its being opened. The room may be greatly brightened by a judicious introduction of yellow jute brocade draperies. This fabric can always be bought for about 1*s.* 9*d.* the yard, 50 inches wide, and has a most silky appearance. It might be used for long window-curtains, for a portière, and for a mantelpiece drapery, and, with a blue art-carpet on the floor, the room will look pretty at once. For furniture, half a dozen wicker chairs of different shapes, a box ottoman (which will really hold all the household linen), three little tables, and three fitments made out of an old chest-of-drawers, picked up for a few shillings second-hand, would suffice. The kind of chest required is one with three long drawers and two short ones, all of the same depth. The two centre long drawers must be taken out and the two short ones fitted into the space just above the bottom drawer. These must be boarded in at the top, and a yellow silk frill nailed across the front of the vacant space, thus forming a deep well. The piece of wood which previously divided the two small drawers from one another, should be carefully removed and utilized again for the same purpose. A sliding desk can now be inserted in the position which they lately occupied. All round the inside of the top of the chest there should be a frill of yellow silk. This fitment must be stained dark oak, and have brass drop-handles to the drawers. Its best position will be just in front of the window. The two long drawers can be used for books and china. They must stand on end, be fitted with three shelves, and have a lining of yellow sateen, the exterior being enamelled ivory-white.

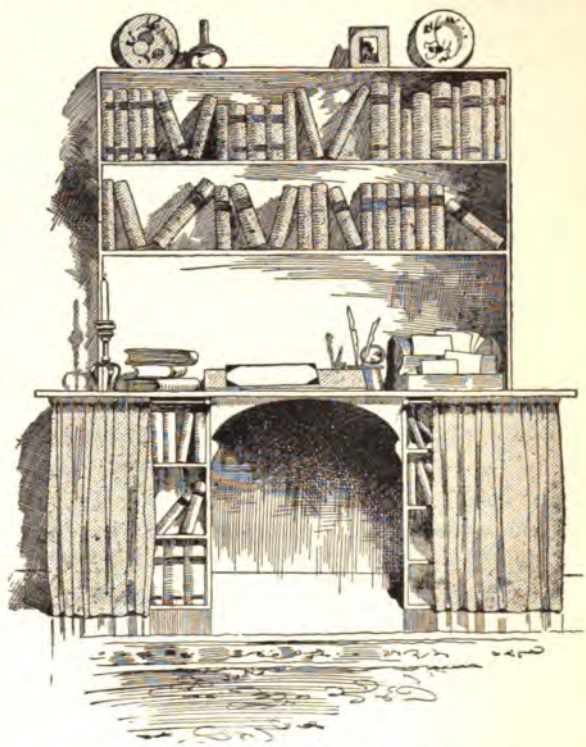


Fig. 87.—Fitments for Recess in Dining-room, forming Escritoire and Book-case.

The ottoman can be placed with one end against a fireplace recess, and a drawer-fitment, with a bowl or jar of flowers on the top, fixed at the

other, as in fig. 88. The glass above the ottoman is a very simple arrangement. It is only an ordinary hanging-glass, the frame enamelled white, and on the top a deal shelf, having a hole at the end from which a fern-pot is suspended by brass chains. If the other drawer is placed in the other recess, it can be used as a lamp-stand.

Bedroom.—The bedroom is very small, and to gain enough space to move about, the bedstead must be placed with one side against the wall and the foot towards the window. Besides this there is only room for one



Fig. 88.—Box Ottoman, &c., for Drawing-room of Small Flat.

piece of furniture, a combined wash-stand, chest-of-drawers, and dressing-table, which can be bought in hazelwood for £4, 10*s*. Where there is any available space on the walls, pegs can be fixed up with a wooden shelf above them, from the edge of which a cretonne curtain can be hung for the purpose of preserving the clothes from dust. Small box ottomans covered with cretonne will hold hats, and may be substituted for chairs where space is so valuable. If the walls are distempered pink, the hangings made of pretty blue cretonne, and the floor covered with cream matting, the room will look pretty, but it must be kept scrupulously neat, as the luxury of untidiness may not be indulged in in any part of a small flat.

Other Rooms.—The bath-room can be used as a dressing-room. For this purpose there should be a hanging-glass, price 4*s*., with two shelves below for brushes and combs, and a tripod wash-stand of enamelled tin, with earthenware basin, soap-tray, towel-rail, and can, which may be bought

complete for 10*s.* 6*d.* Above the bath itself there should be a shelf for soap-dish, sponge-basket, water-bottle and glass, and hot-water can. The secret of making a tiny flat comfortable is to have every convenience in as small a space as possible.

The kitchen, besides the dresser, usually a fixture, will only require a table and two Windsor chairs, but it should have as many shelves and cupboards as space will allow.

Flats for Occasional Residents.—It must not be supposed that a small flat is necessarily inhabited only by those who are not well off. Many people possessing country houses own a tiny flat in town, preferring it to a hotel on account of the privacy which it secures. Such flats sometimes have dining-room, drawing-room, and bedroom on one side of the hall, and kitchen, bath-room, and servant's room on the other. In one flat of the kind the drawing-room is furnished with Sheraton chairs and settee, Vernis Martin cabinets and a pianette, the walls being panelled with rose-pink brocade. The dining-room is in Chippendale style, with only chairs and table, as there is no space for a sideboard. The bedroom is French, with draperies of pale-blue silk and white lace, and the fitment furniture enamelled white. The walls of both kitchen and bath-room are covered with a white tile-paper, which looks most dainty and fresh.

HEATING AND LIGHTING.

HEATING ARRANGEMENTS.

Methods of Diffusing Heat.—For a clear understanding of the various modes and processes used, and of the difficulties to be encountered, in the artificial heating of dwellings, a short explanation of the principles involved will be necessary.

Heat is transmitted in three ways—by radiation, by convection, and by conduction. In the first case the rays flow in straight lines in all directions from the source, and, without materially warming the medium through which they pass, are eventually absorbed by the bodies on which they impinge. In convection, which requires either a gaseous or a liquid medium, the particles nearest the source of heat, becoming warm, expand and rise, allowing others to take their place, and thus a current is established which continues until the whole of the medium is of uniform temperature. In conduction, the heat is transmitted from particle to particle, as when one end of a metal rod is placed in the fire. Open fireplaces are illustrations of the first process, and close stoves and hot-water pipes chiefly of the second, though a certain amount of radiation takes place from them also.

These two modes of diffusing heat may be illustrated by very familiar examples. The sun's heat reaches us by radiation, the air itself being warmed only to a very slight extent during the passage of the rays. It is not until the earth's surface is heated that the air resting on it becomes hot by contact with it, and that the convection begins to be considerable. Hence the daily maximum temperature is generally reached only shortly before 3 P.M., and not at noon as might be expected. Again, it is possible to hold one's finger quite close to the side of the flame of a candle or a gas jet without suffering any inconvenience, the heat being radiated from this part, but if the hand is put at even a considerable distance from the top of the flame the heat cannot be borne, for it is here transmitted by convection.

OPEN FIRES.

There can be no doubt that, in England, the most popular method of warming a room is by means of the open fire, and much may be said in its favour. (1) The cheerful appearance which it presents is by no means an unimportant factor in securing the comfort and happiness of an ideal home, and no other arrangements, however economical or efficient, can give

the same feeling of brightness. (2) As an aid to ventilation the open fireplace is most valuable. In an ordinary house the chimney is the chief outlet for foul air, and this is the case whether there is a fire in the grate or not. When the fire is lighted the air in the chimney is warmed, and, being lighter than the cold air above, rises; a fresh supply of cold air rushes in from below to take its place, and thus there is a constant current through the room. (3) Owing to this perpetual interchange the air does not become too dry. This is an important advantage, because too dry an atmosphere is extremely irritating to the respiratory passages. (4) It is affirmed by some authorities that rooms warmed by an open fire require less frequent re-papering and painting than those where stoves are used, the dirt in the former case being chiefly confined to the fireplace and chimney.

On the other hand, an open fire has these disadvantages. (1) It is an inefficient method of introducing warmth, the heat not being distributed equally to all parts; persons or objects near the fire are overheated, whilst the remoter portions of the room are very imperfectly warmed. The effect of radiant heat lessens according to the square of the distance, so that the heat at 10 feet is one hundred times less than at 1 foot from a fire. (2) There are cold draughts along the floor. (3) There is a loss of heat, as a great amount passes up the chimney without entering the room at all, and this, added to the imperfect combustion of the coal, makes the method very wasteful. (4) The constant attention required by an open fire involves a large amount of domestic labour. (5) The annual cost is very large in proportion to the amount of heat given. It has been estimated that out of 13 cwts. of coal 8 are wasted.

The first cost of an open fireplace is relatively small, and to a tenant means merely the cost of adjuncts, such as fender and fire-irons. In the case of any person building a house for his own occupation stoves may be slightly cheaper, but the difference between the two is trifling. In Scotland the fireplace is not usually a fixture; a new tenant may have to supply his own grates just as he supplies his own gas brackets.

Common Defects of Grates.—Many of the above objections are due to structural defects, which should be remedied if possible. (1) The grate should not be placed against an outside wall, as this position involves loss of heat and tends to make it smoke, since, the back of the chimney being placed against the cold outside air, a large amount of heat is conducted away, while the liability to down-draughts is increased owing to the length of time required to warm the column of air in the chimney. (2) It should not stand too far back under the chimney, as this also causes waste of heat. (3) The back and sides should not be made of iron, partly because that metal, being a very good conductor, absorbs the heat, and partly because in such cases there is frequently a space left between the back of the grate and the wall of the chimney, which results in a loss of heat by radiation as well as conduction, and also accumulates soot. (4) The bars of the grate should not be too far apart, or placed at a great distance from the hearth; otherwise, the coal burns too quickly, and pieces

of coal are liable to fall through before they have been properly burned; also, the floor level in such cases is always cold and draughty.

Many of these defects have been overcome by modern improvements. Mr. Pridgin Teale, of Leeds, who is the great authority on these matters, has laid down some very clear directions in respect of them. Briefly stated, his advice is to the following effect:—(1) As little iron as possible should be used. (2) The back and sides of the grate should be of fire-brick, which has the property of retaining much more heat than iron, and for a longer time; and further, a fire is much more easily kindled in a grate of this

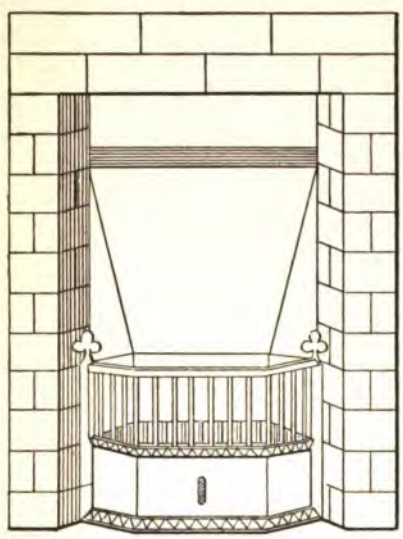


Fig. 89.—Front View of Teale Fire-grate

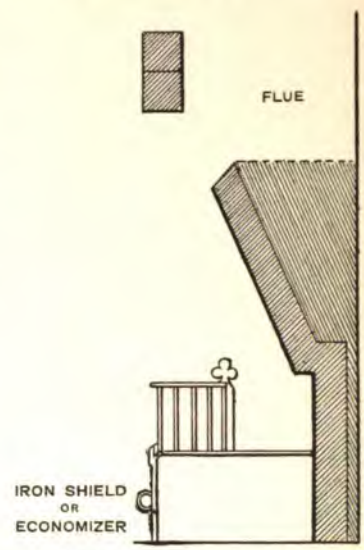


Fig. 90.—Vertical Section of Teale Fire-grate.

kind than in one made of iron. (3) The back should lean well over the fire; for, becoming hot speedily in this position, it radiates the heat into the fire itself, and thus helps to secure more perfect combustion and to reduce the amount of unconsumed smoke passing up the chimney. (4) The grate should be wider in front than at the back. If the two sides are parallel the heat from them is thrown back into the fire instead of into the room. For a small room the depth should be about 9 inches, and for a large one not more than 11. (5) The slits in the bottom grating, and the bars in front, should be narrow and vertical rather than horizontal. (6) The space beneath the fire should have a close-fitting iron shield, or economizer as it is called, by means of which the rate of combustion may be regulated. These points are illustrated in the Teale fire-grate (figs. 89 and 90).

In some patterns of grate the fire-brick is covered with tiles coloured to harmonize with the furniture and decorations of the room, one example of this being the old Leamington grate. Fireplaces may also be obtained made almost entirely of glazed tiles. In such cases the back of the grate is lined with fire-brick, and the only iron used in its construction is in the

bars. These fireplaces, although more expensive than ordinary iron and tile grates, are more satisfactory in many respects, the tiles themselves absorbing a large amount of heat and serving as radiators. Such a fireplace may indeed be almost regarded as a storehouse of warmth, which is given off so slowly that the room does not become chilled for a considerable time, even after the fire has gone out. An additional advantage is that such a fireplace is very easily cleaned and kept clean, no blacklead being necessary except for the bars.

Many grates at the present day are fitted with movable canopies or blowers, which regulate the combustion to some extent. A very efficient grate has been designed with special regulating doors for this purpose.

How to Light a Fire.—The simple matter of lighting a fire to some persons presents great difficulty. The first thing is to lay it properly.

After cleaning the grate, and sweeping away the soot from the register and lower part of the chimney, a few cinders should be put at the bottom of the grate, then some crumpled paper, then a few chips or sticks placed crosswise, and finally the small pieces of coal and some of the larger cinders. Care must be taken that these lumps are so arranged as to allow a free passage of air, which is as necessary to the lighting of a fire as coal and wood. The light must be applied to the paper at the bottom of the grate.

The custom of commencing or leaving off fires at a certain fixed date is very absurd and unhygienic; climatic conditions are not regulated by the date of a spring cleaning, and to put out the fires in May and wait until October to resume them is ridiculous.

STOVES.

A stove is differentiated from an open fire mainly by the fact that the fuel is burned in a close chamber, and consequently almost all the heat generated is utilized.

There are two chief varieties of stoves, closed and open, both of which burn one of three substances—(1) Coal or coke, (2) gas, (3) oil. It may be advisable to state at once that, if the heating arrangements are to comply with the laws of health, flues are essential in the case of coal, coke, or gas.

The conditions needful to secure success are somewhat similar in every case, and as they all have some common features, it will be well first to consider this system of heating generally in respect of its merits and defects. On the former score it may be said that (1) the first cost is small, and in this matter a stove is slightly cheaper than an open fireplace; but, of course, a tenant living in a house already provided with fireplaces will find the addition of stoves an extra expense. (2) The annual cost is very small as compared with other methods, the combustion of the fuel being much slower and more perfect than in ordinary coal fires, while it is possible in some ca[illegible]ect an economy in the kind of fuel burned. (3) Stoves are als[illegible]nt than open fires because, the heat being distributed largel[illegible]n, the air of the room is more equally

warmed. At the same time the sides of the stove and the flue itself act as radiating surfaces.

The use of stoves is, however, open to many objections. (1) The aid to ventilation is much less than with open fires, partly owing to the small size of the flue as compared with an open chimney. (2) The air of the room is rendered too dry. (3) There is a disagreeable burnt smell, due to the fact that the organic particles, always present in the air of every inhabited room, come in contact with the hot iron and are thus charred. (4) There is an

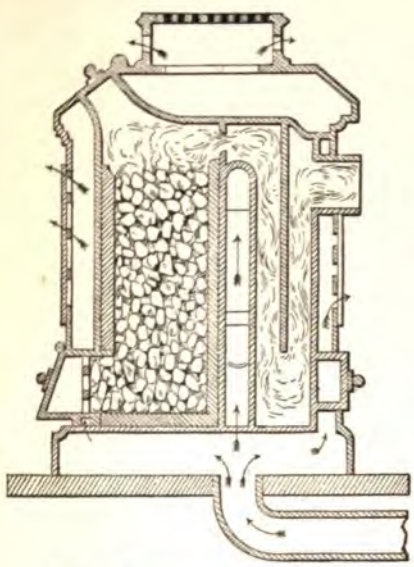


Fig. 91.—Section of Musgrave's Stove.

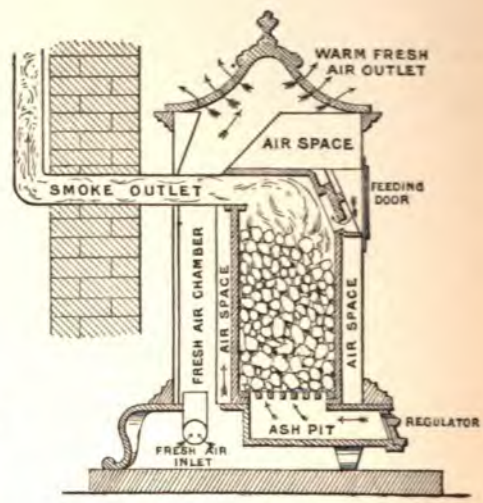


Fig. 92.—Section of Slow-combustion Stove.

escape of a dangerous product of combustion—carbonic oxide (or carbon monoxide)—in cheap, badly-fitting stoves, and possibly in all made of cast-iron. This is a very serious defect; as the stove becomes red-hot the iron is rendered porous and allows this gas to escape, causing the headaches and drowsy feelings from which so many people suffer in stove-heated rooms. (5) A stove is less cheerful than an open fire.

A great many of these defects may be remedied. The imperfect ventilation of the room may be somewhat improved by the use of a ventilating stove which admits fresh warm air. Many stoves are now specially constructed for this purpose. Fig. 91 gives a sectional representation of one which admits outside air by a pipe underneath the stove. The stove itself consists of an outer case, shown by the outside lines, the space between being divided by ribs of metal into a series of air-chambers, in which air entering from below circulates, becomes warmed, and rises into the room through openings at the top and sides of the stove. There is also in front of the stove a special arrangement of tubes which supply atmospheric air for the combustion of the fuel.

The constant evaporation from a vessel of water placed on the stove will largely reduce the dryness of the atmosphere. The disagreeable burnt smell and the escape of carbon monoxide may be avoided if the stove—preferably made of wrought iron, which is more resistant than cast—is lined throughout with fire-brick. The joints of a stove, whether of cast or wrought iron, or tiled, should be absolutely perfect, to prevent the gases of combustion from entering the air of the room. For this reason, it is false economy, from the point of view of health, to buy cheap, badly finished, badly fitted stoves. A very good form is one made of tiles with a fire-brick lining. In England this kind of stove is usually open, and it has many points in its favour, although the first cost is great, and more fuel is consumed than in an ordinary close stove. The appearance is distinctly more cheerful, the amount of heat given out is greater, and the burnt smell and escape of carbon monoxide are avoided. Such a stove possesses also the advantage of being easily cleaned. In Sweden and other parts of the Continent, a round closed tile stove, somewhat resembling a pillar, is used in all sitting and bed rooms. It is fitted with doors, which regulate the rate of combustion, and is highly satisfactory as a heat-giver. The cheerful appearance so delightful in an open grate is entirely lacking in some kinds of close stoves, but many are now manufactured both in England and America with transparent mica panels or doors, the fire being thus rendered visible to some extent.

The exterior of many stoves is so constructed as to afford an extra surface for radiation. They are very useful for warming large halls and passages, but for an ordinary room those with a plain surface will be found quite sufficient.

In the matter of fitting there are a few points to which attention must be drawn. If the stove is connected with the chimney care must be taken to see that the latter is not liable to down-draughts. Such liability is, unfortunately, a common defect in chimneys, being often caused by the too close proximity of other buildings or even of trees, in which case the defect may be remedied by increasing the height to a considerable extent.

Wind guard-tops or cowls are not always satisfactory. If the room in which the stove is to stand is unprovided with a chimney, the stove will, of course, have a flue of its own, consisting of an iron pipe leading to the outside air; the pipe should have as few bends in it as possible, and the joints should be most carefully cemented. Where the stove is to be fixed in a room with a wooden floor, insurance companies oblige their clients to provide a metal or flag base, on which the stove must stand.

Gas Stoves and Fires.—In considering the various gas-heating arrangements it will be best to follow the classification made at the commencement of this article—(1) those which warm by means of radiant heat; (2) those which warm the air by convection; and (3) those which combine the two methods.

The type which warms by means of radiant heat is exemplified by the open gas fire, which consists of a row of special burners placed under an

ordinary grate filled with asbestos. This presents almost as cheerful an appearance as a coal fire, and has the further advantages in common with all forms of heating by gas, of being easily lighted, requiring no attention, and giving rise to no dust or dirt. In the climate of the British Isles this ready means of obtaining warmth at a short notice is a great convenience, but the amount of heat radiated is not equal to that of a coal fire, and all authorities agree that the initial as well as the annual cost is greater.

Where gas fires of this sort are used, the opening into the chimney flue should not be narrowed to any considerable extent, otherwise the poisonous products of combustion will pass into the room, rendering the atmosphere very impure, and having an injurious effect on the furniture, the silver, and the bindings of books.

The second type includes all forms of closed stoves. There are many different variation of these, some good, some bad; condensing stoves with or without a flue, and ventilating stoves properly so called, are included amongst them. In a condensing stove no fuel is used. The gas jets are burned in a cylinder having an arrangement of tubes for collecting some of the products of condensation and combustion into a pan at the bottom of the stove, this pan requiring to be emptied daily. There is an inlet, connected by a pipe with the outside, which admits fresh air; this ascends through the stove and passes out into the room at the top of the stove. No special flue is provided for the escape of the products of combustion, and as they do not all fall down with the water (itself a product) into the pan at the bottom, the stove is less healthy than some others, and any room in which it is used should be provided with a special outlet for foul air.

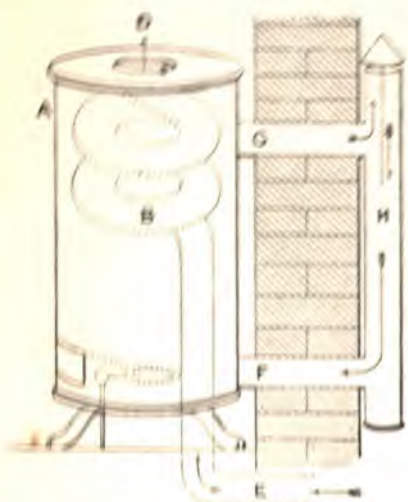


Fig. 93.—George's "Calorigen" Stove.

A, Outer case, containing coiled wrought-iron tube, B, into which outside air is admitted at E, and is discharged (warmed) at D; air passes into A by tube F, and the combustion products are carried off at G; H, pipe to assist air circulation.

The ventilating stoves are a great improvement on this form of close stove. There are many varieties, of which the Calorigen and the Euthermic require special notice.

In the case of the Calorigen (fig. 93) the stove is made of rolled iron, and contains a coil of wrought-iron piping, which opens at the top of the stove, and is connected at its lower end with a pipe communicating with the outer air. There are also two pipes or flues leading from the stove to the outer air, which carry away the products of combustion. The burning gas jets serve the double purpose of heating the stove itself and the air contained in the coil within it.

The construction of the Euthermic stove (fig. 94) is slightly different. The body of this stove is made of corrugated iron, thus giving an increased surface for radiation, while within is a metal drum, as it is called, which, like the coil in the Calorigen, communicates by means of a pipe with the external air, and also has an opening in the top of the stove to pass the warmed fresh air into the room, and a flue for carrying off the combustion products. The main difference between the two stoves is that as the Euthermic is not closed at the bottom, it helps to ventilate a room.

The third type is one which gives out heat by both radiation and convection. Examples are the open stoves so commonly used known as

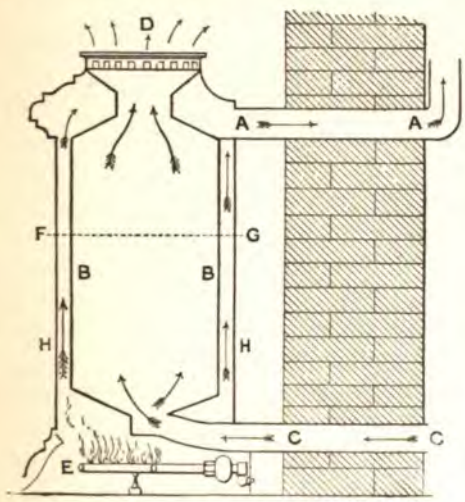


Fig. 94.—Section of Bond's "Euthermic" Stove.

H H, Outer case, inside which is metal drum, B; C, tube for conducting outside air into B; D, grating for discharging warmed air into room; E, gas-jets. Products of combustion escape by flue A.

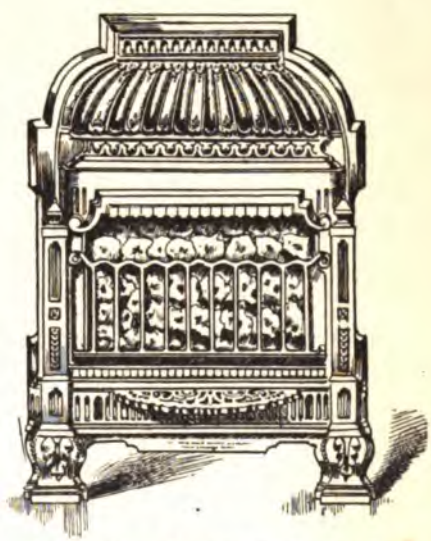


Fig. 95.—View of Fletcher Gas-stove with Iron Fret Front.

incandescent gas fires (fig. 95), which may be fitted in front of an ordinary fire-grate or used in rooms where there is no fireplace provided.

Either asbestos or filagree iron is used to radiate the heat, the hollow balls of asbestos being the most satisfactory for the purpose. These stoves are very efficient heat-givers and have also something of the cheering effects of a fire, but some extra attention must be paid to the general principles of ventilation, if health is to be considered. Dr. Reid, in his well-known *Handbook of Practical Sanitation*, says, in this connection: "It is essential for ventilating purposes that the opening of the fireplace proper should be quite free and not filled up with sheet-iron as is often done, otherwise the ventilating effect of the chimney will be greatly lessened, particularly when the fire is not actually burning. The air in bedrooms, in which gas stoves have been fixed in the objectionable manner just described, is very foul in the morning if the stove has not been burning all night, and in the absence of any special outlet ventilation."

It is impossible to enumerate all the forms of gas stove now in use, but a warning must be uttered against the use of a kind occasionally to be met with, unprovided with flue or pipe. These stoves are very cheap, and they make the air of a room hot, but at the same time they contaminate and poison it.

Gas stoves may often be hired from a gas company.

It is worth mentioning here that the habit of warming a bedroom by lighting the gas should be avoided.

Oil Stoves.—As sources of heat, oil stoves present many objections. They are troublesome to keep clean, and if neglected in this respect are certain to smell unpleasantly. They use up a large amount of oxygen, and if placed in the middle of a room, not in the fireplace, they vitiate the atmosphere, as all the products of combustion are passed into the room itself.

The first cost of oil stoves as compared with those burning gas, coal, or coke is small, no fitting being necessary. The annual cost is comparatively large, if the stove is in constant use. This does not apply to localities where coal is sold at prohibitive prices.

There are infinite varieties of oil stoves, burning various sorts of wick, and varying in price from half-a-crown upwards. The more expensive kinds, usually made of glazed ware, are naturally the more efficient. A small single-wick stove, costing 3*s.* 6*d.*, will keep a room of 1000 cubic feet at a temperature ranging from 50° Fahr. to 65° Fahr., according to external conditions. The cost, if the stove is kept burning for twenty-four hours with oil at 7*d.* per gallon, is about 3*d.* The kind of oil used makes a difference in the annual cost of such a means of heating, but the poorer kinds are not to be recommended.

HOT-WATER PIPES.

In the case of hot-water pipes the heat is transmitted by convection. Although theoretically they constitute a very efficient way of warming a house, practically they have serious drawbacks; they involve a large first cost, are wanting in cheerfulness, and render the air of a room more or less stuffy. The chief advantages of hot-water pipes are that they involve very little domestic labour, cost little after the initial expense, and distribute the heat equally.

There are two systems employed, known as the low-pressure and the high-pressure systems. In the former there is usually a boiler in one of the cellars (fed from a separate cistern which must be as high up as possible) from the upper end of which a pipe runs, sending out branches to all parts of the house; these branches bend back and return underneath, finally uniting into another single pipe, which re-enters the boiler at the bottom; so that in each room there is always this double row of pipes. The size of the pipes will depend on the amount of heat required, but they are usually 4 inches in diameter.

The circulation of water in the pipes is kept up by the tendency of water when heated to rise. As it travels on its way, it parts with its heat, becomes colder and heavier, descends into the lower pipe, and so returns to the boiler. Twelve feet of piping will heat 1000 cubic feet of air to 65° F.

The second method, known as the high-pressure system, is somewhat different. In this case the pipes conveying the hot water actually pass through the kitchen fire. There is no boiler, and a very much greater amount of heat is obtained, while less piping is necessary and the pipe has a smaller bore. The main danger is the liability of the pipes to burst, but this is diminished by the use of safety-valves and escape-pipes.

Houses are occasionally warmed by hot air, but for the reasons stated this method is more suited to large institutions than to private dwellings.

Hot-water Supply.—Various methods are employed for supplying houses with hot water, some of them safe and efficient, others not so satisfactory.

A form which is still to be found in old houses is known as the worm-boiler system (fig. 96). It consists of a coil of piping within the kitchen boiler constituting the worm, supplied with water from the cistern at the top of the house, the boiler itself being supplied by a small cistern near the range. Both boiler and worm are fitted with escape-pipes. The water in the worm is heated indirectly by the water in the boiler. This arrangement is safe and fairly satisfactory so long as the supply of water in the boiler receives proper attention, otherwise, in a red-hot dry boiler the joints of the worm may give way; but there is this disadvantage that the hot supply of the kitchen comes directly from the boiler, so that if much were to be drawn out the water in the worm would soon cool down, and the rest of the house would suffer. During frost the dangers are that the condensed frozen steam may form a plug in the escape-pipe of the worm, and the cold-water supply to the boiler may also freeze.

In the method generally applied to houses (fig. 97) there is a cylinder or reservoir close to the range and connected with the kitchen boiler. Through the lower part of this cylinder the cold supply passes on its way to the boiler, and the hot supply through the upper part on its way from the boiler, the whole arrangement depending on the principle that hot water, like hot air, rises.

The possible freezing of the supply-pipes in cold weather and the consequent boiling dry of the cylinder are serious matters. This danger, however, is more apparent than real, as the condition of the cylinder can always be ascertained by tapping it and observing whether it sounds empty or full; if empty, the kitchen fire should at once be put out. The hot escape-pipe would not be so likely to be plugged with ice because of the presence of hot-water pipes in its immediate vicinity.

A faulty system sometimes found in smaller houses has no reservoir of any kind. The boiler behind the kitchen fire is fed from the cistern at the top of the house, the pipe leading from it enters the boiler at the bottom, that supplying the rest of the house leaving it at the top; it is fitted with

the usual hot escape. In frosty weather if both these pipes are blocked the steam cannot escape, and an explosion results. If the supply-pipe alone is frozen, in a short while the boiler becomes dry and red-hot, and a sudden renewal of the cold supply, as when a thaw comes, causes an explosion, the water being instantly converted into steam.

There are two ways of guarding against accidents of the kind: either run off all the water at night, and cut off the supply from the main—the

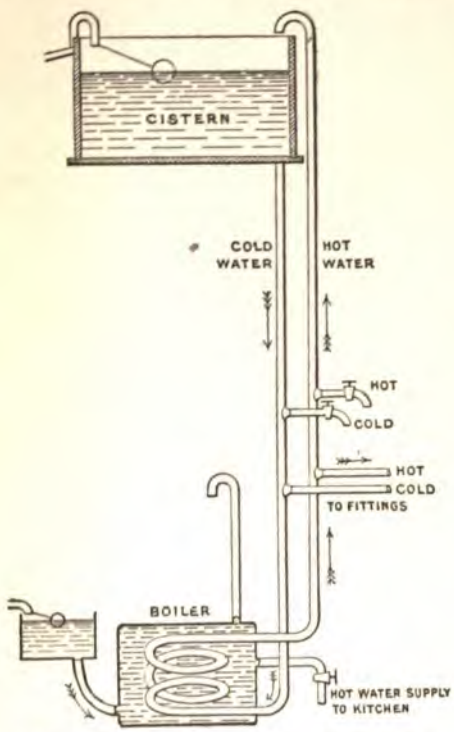


Fig. 96.—Hot-water Supply: Worm-boiler System.

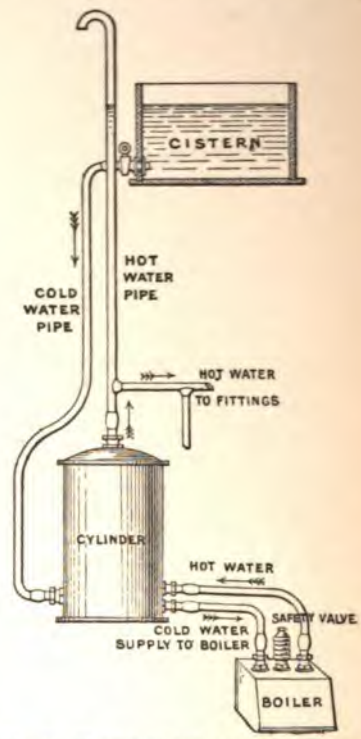


Fig. 97.—Hot-water Supply: Cylinder System.

supply must in this case be renewed before the fires are relighted; or have a safety-valve fitted to the boiler.

FIRE ACCIDENTS.

Precautions against Fire.—It is an old saying that fire is a good servant but a bad master; in all circumstances therefore one should remember that in order to minimize risks the fire used for heating apartments and for other purposes must be kept within certain proportions. Further, the chimney and fireplace should be so constructed that there is no wood under the hearthstone or behind the grate, and that no beams of wood pass through or rest in the chimney. As before stated, there should be no space at the back between grate and chimney; soot accumulates in such a space and may easily become ignited.

Special precautions must be taken in nurseries. Curtains and children's dresses may be rinsed after washing in alum water (proportions, 2 oz. alum to 1 gallon of water); this is said to render them less likely to ignite. The nursery fireplace should be surrounded by a high wire-guard, and only safety-matches should be used, and should be kept if possible in metal boxes out of the reach of children. All garments requiring airing or warming before the fire must be carefully watched, and not placed too close to the bars. In making and lighting a fire, the light substances used for kindling should not be left in the grate. The habit of pouring paraffin or turpentine on badly-made fires to help them to ignite more quickly is most dangerous. It is also dangerous to put firewood on the stove to dry. Lights of any kind should not be placed near curtains, and the habit of reading in bed, with a candle or a lamp by the bed-side, is very unwise. Many people keep buckets of water on each landing to be ready at any time in case of fire. This is a wise precaution, but not always practicable where space is limited.

Extinguishing Fires.—The most speedy way of extinguishing a fire is the one generally employed, namely, to dash water on the burning mass. If curtains, valances, or hangings of any kind become ignited, they should instantly be torn down to prevent flames from rising to the upper portions of the room and furniture. If water is not available, some thick woollen material flung on the burning substance will be of great assistance, because wool does not burst into flame so readily as other fabrics, and by this means the fire can soon be stamped or crushed out. The ordinary mineral-water syphon or seltzogene, or even a soda-water bottle, is useful for extinguishing fire, the water in them being highly charged with carbonic acid gas, which will not support combustion, and hence will instantly extinguish flame. Hand-grenades, which have a similar effect when broken, can be obtained; they are usually kept as a safeguard against fire in shops and other large establishments.

Plain water will not extinguish burning oil. Earth, ashes, or sand is the best extinguisher in such a case, but water charged with carbonic acid is equally effective and is used by fire brigades.

Chimneys on Fire.—The firing of chimneys may be prevented by the exercise of a little common care and common-sense. The flues should be swept regularly, and no soot should be allowed to accumulate near the opening of the fireplace. When a chimney is actually alight, the usual plan is to sprinkle the top of the fire with salt, as this extinguishes the fire in the grate; afterwards the soot in the chimney soon burns itself out. Other methods already indicated can be applied in this case also. Setting a chimney on fire in a town for cleaning purposes is very reprehensible, and renders the householder liable to a penalty not exceeding £5; the maximum penalty for an accident not due to neglect or carelessness is ten shillings.

Cost if Fire-engine comes.—In the case of a serious outbreak it will be necessary to send for a fire-engine. The cost of this will depend partly on the locality, but as a rule in the case of insured property an arrange-

ment is concluded between the owner and occupier to divide any possible expenses of the kind. Different districts will vary in the amount charged, £1 for a hose carriage and an additional charge for each man, £2 inclusive for a steam fire-engine being very usual. In London there is a special act which provides that the various insurance companies shall each pay a portion of the amount.

Fire Insurance.—It is advisable to insure all property against fire. The cost of this insurance depends on the nature of the risk and the chances of salvage, the charges being levied according to circumstances. For an ordinary dwelling-house the rate may be as low as 1*s.* 6*d.* per cent for the house, and 2*s.* per cent for the furniture, but 2*s.* 6*d.* is an average charge for a house. Furniture of special value is charged at higher rates according to its nature. But the principal insurance companies have formed a union, by means of which a regular scale of charges has been adopted. It is always safer to insure in old-established companies, as they are better able to meet large unexpected claims than the newer ones, which, in order to increase their business, sometimes offer somewhat misleading advantages. Policy conditions vary considerably, but all companies follow certain definite rules, which should be read carefully before the policy is accepted. A point to be remembered is that the insured is not supposed to benefit by a fire, and is therefore debarred from making a profit.

LIGHTING.

Methods of Lighting.—Of the artificial lights in use for domestic purposes candles are the most elementary and insignificant, oil-lamps the most general and economical, coal-gas the most convenient and trustworthy, electric lights the most healthy, safe, brilliant, and luxurious. Assuming that all methods are equally available, the average householder will choose gas, and the result will justify the preference.

Relative Cost.—The cost will depend upon the market price of petroleum and the local price of gas and electricity. Petroleum will prove the cheapest illuminant almost everywhere. Roughly, to be at all equal in cost, petroleum of 0·800 specific gravity should be had at 9*d.* a gallon, gas at 1*s.* 8*d.* per 1000 cubic feet, and electricity at 2*d.* the Board of Trade unit.

As to the relative consumption per light, given the most favourable circumstances, the best lamps, burners, fittings, &c., it may be taken that each light of 14 to 16 candle-power will require, in one thousand hours, 11 gallons of petroleum, or 5000 cubic feet of gas, or 50 Board of Trade units of electricity. The incandescent gas-light will require but 1000 cubic feet of gas for the same period, but the "mantle" will be more than half used up, and the electric incandescent lamp will also have worn out. It is when a light of greater power or intensity is required that the economy of the

"incandescent" system becomes appreciable. The electric light is also economical when a very brilliant light is desired.

Lamps and Ceilings.—Of the different systems, the electric light is the cleanest, because it produces the least heat. Ceilings are discoloured by the current of heated air rising from the lamps or gas. With oil-lamps the discolouring is less noticeable, because the light is not invariably in the same place; but as hot pipes discolour walls, cornices, and the ceiling near them, it is evident that the air current must carry and deposit the dust, dirt, and fog on the roughened surface of the walls. With large lamps, the incandescent gas-light, and all gas-burners near the ceiling it is advisable to use smoke-consumers or heat-deflectors, which, if they do not prevent the accumulation of dirt, at least diffuse the currents of air and make the discoloration more general. With low ceilings and in foggy districts it is a good plan to paper the ceilings, varnish well, and wipe frequently.

Accessories. — In the arrangement of the fittings wall-brackets are more effective than pendants or "crown" lights, but they should be fixed so that the "lights" are above the level of the eyes; 6 feet is a good average height. The number of lights is immaterial, the illuminating power being governed to a great extent by the colour of the walls and ceiling. The palest colours—pink, yellow, light-blue—require less illumination; a room with a white ceiling and cream-coloured walls will be as light with 33 candles as the same room would be with 87 candles if the walls were brown oak-panelling or painted maroon. To diffuse light a rectangular lantern is better than a globe, and a plane better than a cylindrical surface. A clear crystal having as many facets as a well-cut diamond is the best of all.

As to the material, clear glass obstructs 12 per cent of the light, engraved glass from 14 to 18 per cent, ground glass 30 per cent, opal 60 per cent; on the other hand, the special globes of transparent glass, finely grooved or chequered, give an increased illuminating power of about 12 per cent, but at the same time absorb 9 per cent to 14 per cent, as do other glass globes.

In arranging lights the use of mirrors and reflectors, for the purpose of economically increasing the illuminating power, should not be overlooked.

GAS.

No artificial light is more satisfactory than gas, because no other requires so little attention and is so absolutely and continuously available. True, the quality, as well as the price, varies according to localities and seasons, but as the cheaper "water-gas" is now more largely added, the coal-gas itself being almost always enriched with various carbons, the price is likely in future to be lowered and the quality at least maintained. Scotch gas from cannel-coal is much richer than that obtainable in London or England generally, and may be used with smaller burners than are to be found in most English houses.

To obtain the best results it is essential that the fittings be sound. In France all pipes are submitted to a government test before the gas

is connected, but in this country the soundness of the pipes and fittings is the consumer's concern alone. As pipes, fittings, and joints, particularly soldered joints, decay owing to the chemical action of the gas, they should be tested before taking up a tenancy, and at intervals afterwards, or whenever it is suspected that a leak exists.

It is economical to turn off the gas at the meter every night, but if this is done, care should be taken that every burner has been turned off; otherwise, when the gas is turned on again, there will be not only a loss from the consequent escape greater than was likely to result from the gas having been left "on", but the risk of an explosion besides.

Leakages.—The simplest way to determine whether or not there is a leak in the fittings is to turn off every burner and watch the meter. But if the leak is a small one, it may not stir the index one point for hours. A quicker method (fig. 98) is to obtain a 12-inch length of glass tube, heat it in a flame and bend it into the form of a U; then fasten to one leg a short length of tight-fitting india-rubber tube, pour water into the bent tube until about 3 inches of it is filled, and slip the free end of the india-rubber tube over a burner, turning on the gas at that burner. The pressure of the gas will change the level of the water in the legs of the tube. The level should be noted and someone sent to turn off the gas at the meter. If the same level is maintained after the gas is turned off, there is no leak.

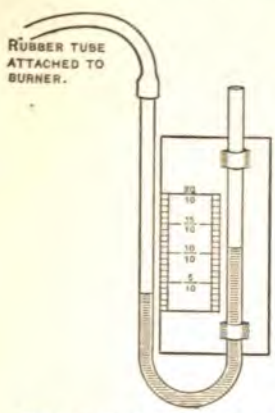


Fig. 98.—Simple Apparatus for Testing Gas-fittings.

The pressure is shown by the difference between the levels of the water in the two legs of the tube. This may be read by means of a scale (on thin card) divided into tenths of inches, attached as above. In the diagram the water in one leg stands at $\frac{4}{10}$; in the other, $\frac{1}{10}$: pressure = $\frac{4}{10} - \frac{1}{10} = \frac{3}{10}$.

A leak ought never to be searched for with a light. Wherever the smell of gas is noticed, it may be assumed that somewhere near there exists gas combined with atmospheric air in a proportion which renders the combination highly explosive. There is no safer way to find the leak than by the smell. If it is not in the fittings but in the pipes, the exact spot may be ascertained by mixing soap and water together as though for blowing bubbles, and painting the suspected pipe with the suds, using a camel-hair brush. Bubbles will form about the leak.

To Stop a Leak.—The surest and easiest way to stop a small leak in an iron, brass, or composite pipe is to paint the pipe, preferably with oil-paint containing much red-lead; but any of the varnish paints will do. Ill-fitting bracket joints can be stopped by lubricating freely with a mixture of two parts of bees'-wax to one of tallow, applied warm. A leak in the burner is of little consequence, since the escape can only be small, and ceases when the gas is turned off from the burner. It can be effectually stopped by rubbing a little white-lead, or better, a mixture of half-white and half-red lead, on the thread of the screw before turning the burner

into its place. The water in the slides of pendent gasaliers requires to be renewed frequently. The cork packing of the kitchen pendant may be treated with the bees'-wax and tallow mixture.

Waste of Gas.—In addition to leaks from defective pipes and fittings, gas is often wasted by being used at too great pressure. Whenever it roars, more is passing through the burner than can be converted into light. The flame should be lowered by turning off at the burner until it assumes the correct shape, as shown in figs. 99, 100. As the pressure varies from hour to hour, being greatest from 5 p.m. until midnight, there should be, in houses where much gas is used, regulating burners, or a regulator on



Fig. 99.—"Fish-tail" Burner. Correct shape of flame.

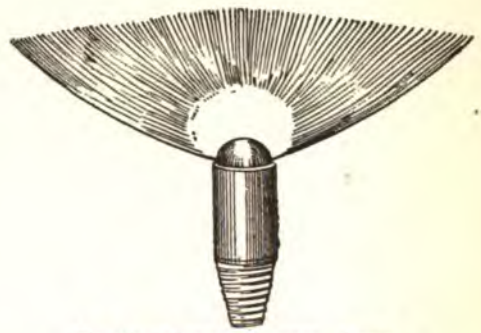


Fig. 100.—"Batswing" Burner. Correct shape of flame.

the main-pipe near the meter, to check the supply effectively. Regulators may be self-acting, or merely an elaboration of the ordinary stop-cock with a delicate indicator and dial in a prominent position.

Meters.—Gas-meters are usually lent by or are hired from the company supplying the gas. If no rent is charged for the meter, the company may be allowed to supply it; if rents are high, it is cheaper to purchase, as an efficient 5-light dry meter can be bought new for 37*s.*, and will last for years. The water-sealed meter is inferior to the dry meter, and gives much more trouble. When the meter is fixed, the stop-cock is fitted between the main supply pipe and the meter. A second stop-cock should be fitted to control the supply of gas as it issues from the meter. Stop-cocks and meter fittings are the consumer's property. It costs about ten shillings to lay on the gas, and the company "cut off" gratuitously. When taking a house from a previous tenant, it is economical, as well as convenient, to pay a few shillings for the meter fittings.

Wet and Dry Meters.—It is to the consumer's advantage that the gas should enter freely into the meter at the highest possible pressure—the pressure in the main,—and that the supply should be checked by a stop-cock or an automatic regulator on the main-pipe issuing from the meter, the ordinary stop-cock on the main to the meter being left always "full on". In the case of wet meters it is best for them to run with as little water as

possible; they should not be refilled until they refuse to work, and then the water should be very sparingly added. With the water at a high level in the meter, the consumer will be charged for as much as 2 per cent more gas than is actually supplied. Houses situated at or near the top of a hill get gas at a higher pressure than those at the average level; if the house is on low ground, a meter larger than necessary for absolute requirements is to be recommended. Instructions for reading the index (fig 101) are given on the card sent with the meter. It is a good plan to examine the index at

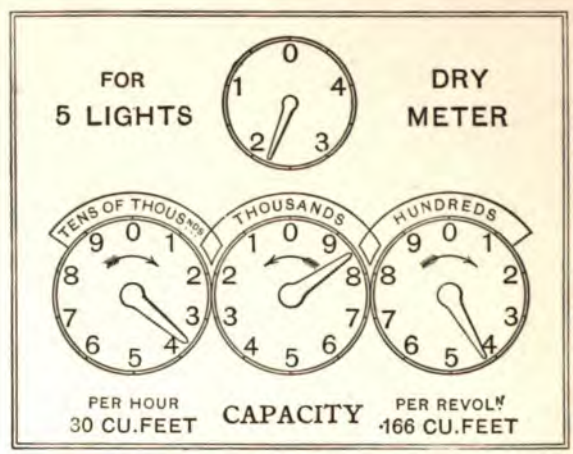


Fig. 101.—Index Dials of 5-Light Dry Meter.

The small dial above, divided into single feet, is not used in calculating the quantity of gas consumed. It is for experimental purposes, and is also useful in detecting leakage, &c. On the dial indicating "hundreds" (of cubic feet), the pointer moves to the right; on the "thousands" dial, to the left; and on the "tens of thousands" dial, to the right. The reading of the meter is obtained by adding together the amounts shown on each dial. The pointer must pass over a figure before it can be counted. Thus, in the example given, the readings are as follows:—400 + 8000 + 30,000, making a total of 38,400. Assuming a reading taken, say, three months before, to be 28,900, the amount of gas passed through the meter during that period = 38,400 − 28,900 = 9500 cu. ft.

regular intervals, and enter the figures in a diary. Any waste or excess in use is then noticed. It may be that the pipes leak, or that the meter is registering faultily. On notice to the gas company (see the meter-card for particulars), the meter will be tested for a small charge. Some meters, especially wet ones, are noisy at work; from a drone the sound increases to a whirr as light after light is lit, and in time this increases to a loud whistle. There is no cure for a whistling meter; the company will change it. In hard weather wet meters often freeze. They may be thawed by pouring boiling water into and over the meter.

Jumping Lights.—Water in the pipes is most often the cause of the lights jumping. Possibly the meter is at fault. The company, on receipt of notice, will send a man with the necessary apparatus to force the water from the pipes. Any other fault in the supply of gas should be immediately notified.

Gas Fittings.—For the ordinary purposes of domestic lighting the incandescent system is preferable. The possible exceptions are lights in

halls, on landings, in the kitchen, and in those situations where it is desirable to change the position of the light frequently, or where it is exposed to draughts. These drawbacks may be overcome by using improved lamps with Clay's patent anti-vibration fittings. The increased power and smaller gas-consumption of the incandescent light make its use economical. With ordinary fittings a pendent gasalier is generally used for large rooms. If possible it should be a fixture, the lights about 4 feet 6 inches from the ceiling. To bring a light close to the table for work, a detachable "pendu" light (fig. 102), costing from 6*s*., without shade, may be used. If a slide pendant is necessary, it is important that the chains to the balance-weights be examined from time to time, and replaced by new ones as soon as signs of wear are noticed. The slide should be kept full of water, the tube being filled to the brim when the gasalier is at its full height.

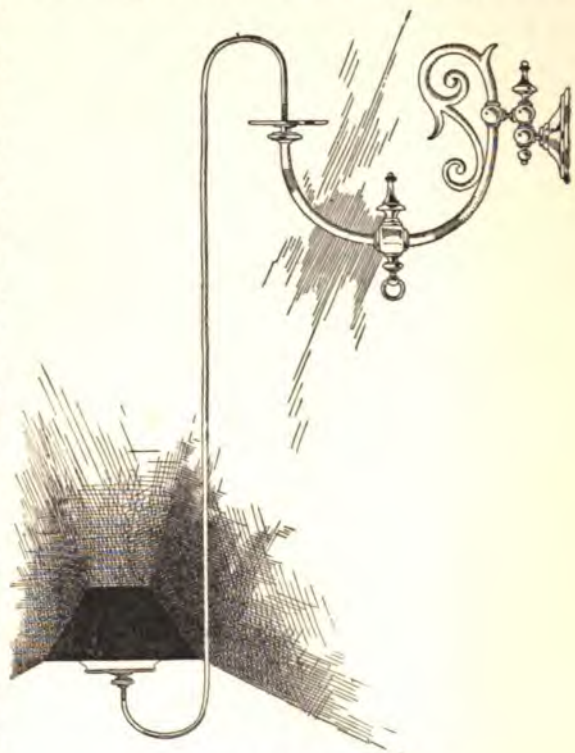


Fig. 102.—Detachable "Pendu" Gas Light.

The "Comet" pattern (fig. 103) is best for burner-fittings of ordinary type. It has no globe-ring, and the "moons" (open globes) rest securely on a tripod. This allows the glass to expand freely with the heat; hence there is less liability to fracture from turning the set-screws too tight, and, better still, the open bottom sheds more light upon the table. To cite one instance of this economy, a gasalier with the cheapest "Comet" fittings has been in constant use in three different houses for a term of over twelve years without any fracture or renewal of globe, burner, or fittings. The same consumer during the same time with a pendent gasalier of the ordinary type required new burners once, as well as four sets of globes of the usual "saucer" pattern.

In living rooms as in bedrooms bracket lights are preferable to pendants, and simple brackets to swing brackets or those with jointed arms.

A hall-lantern of "cathedral" glass costs from one to three guineas, and is practically indestructible. A fixed bracket of wrought-iron and

copper for an incandescent light costs less and gives a better light with equal artistic effect.

The ordinary cork-slide pendant found in kitchens is both wasteful and



Fig. 103.—Gas-burner Fittings.

inefficient. If bracket lights are impossible, a fixed T pendant and a regulating burner, or at least a horizontal reflector attached to the pendant, is to be recommended.

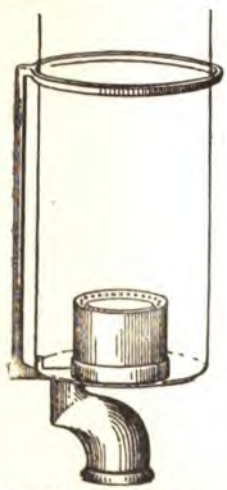


Fig. 104.—Argand Burner.

Burners.—Wenham, Argand, and other regenerative burners are not suitable for domestic purposes, and require more attention than ordinary lights. The most economical burner is that which gives the largest light with the smallest consumption of gas. In the "Argand" (fig. 104) atmospheric air is sucked into the interior of the flame by the action of the heat in the chimney. By this means the combustion is rendered complete, which is seldom the case in an ordinary burner. The disadvantage is the great heat generated.



Fig. 105.—Section of "Fish-tail" Burner.

The "batswing" burner has a simple cross slit; the "fish-tail" (fig. 105) is stopped with steatite, and has two pin-holes at different angles which cause the gas issuing from them to converge and form a hollow flame. These burners are all wasteful. Their sizes, numbered 5, 6, 7, &c., are supposed to indicate the number of cubic feet which they burn each hour.

The quantity is really much more, ordinarily double as much. It is better to have a large burner and regulate the flame by the stop-cock than to have a small one burning "full".

In upper rooms, where there is likely to be a waste of gas, a regulating burner is of greatest use. The common burners, Bray's, cost about 6*d.* a dozen; Sugg's regulating burners about 1*s.* each; and "flat-flame" governing burners, 1*s.* 6*d.* each. These are made in six sizes to give differently-sized flames, from a simple jet consuming 1 foot per hour to a flame equal in lighting power to 20 candles. By means of a steatite float they are automatically adjustable to varying pressure of the gas in the pipe, and should be left full on or turned right off.

THE INCANDESCENT LIGHT.

The Welsbach incandescent gas-light is now generally known. Its principle is the use of a "Bunsen" atmospheric burner to heat a fragile mantle compounded of the nitrates of thoria and ceria, rare earths which glow when hot, and emit a white light of dazzling brilliancy and purity. In the latest pattern a light of about 25 candle-power is obtained for each cubic foot of gas consumed. The Welsbach burner is made in various sizes; the smallest, the "Gem", or "N", burner, is powerful enough for most domestic purposes, and two to five of these lights on brackets will effectively light any living room of ordinary dimensions. The "Gem" burners may also be substituted for the lights in the ordinary gasaliers, but if a central light is preferred, the single pendant, with a "C" burner (fig. 106), giving a light equal to 75 candles, should be used. Fittings for the incandescent light are now made in endless variety, including special fittings for exposed situations.



Fig. 106.—The Welsbach Incandescent "C" Burner, with Bye-pass.

The light, lacking certain colour rays, should not be used with a plain glass chimney; a rose-tinted globe of "crackled" glass is much better. Toning the light in this way is preferable to using mantles which emit a pink or yellow light.

Where the light is in daily use, the burners should be fitted with a bye-pass, which maintains a minute flame when the light is "off"; but in bedrooms and where a number of small lights are used instead of one large one, the ordinary burner is, on the whole, the more economical, as there is no difficulty in lighting from the top immediately the gas is turned on. A regulator is obtainable with the "C" burner; with the others care must be taken that the gas is not too high, otherwise the mantle is destroyed and the gas wasted. After lighting, the gas should be lowered until the best light is

given. This should be done at the stop-cock on the bracket, leaving that on the burner full on.

Mantles.—The mantles are expensive—at present one shilling each,—and after burning 1000 hours the light decreases. They are more usually destroyed through careless handling than burnt out. To put on a new mantle, the burner is removed, blown through to clear out the dust, and replaced; then the fork is put in upright, and the mantle drawn from the box by the threads and lowered, still held by the threads alone over the burner. A little manipulation may be needed to coax the lower edge over the burner, particularly if one edge of the mantle begins to curl up inside. Some trouble here is, however, well repaid, as the mantle will last much longer if placed in position without injury. It is lowered until the cross-thread engages with the fork of the rod; the loose thread is then carefully withdrawn, the gas turned on, and the mantle "burnt off". The gas is turned off and the chimney put on, and the light is ready for use.

Useful Hints.—Great heat is generated by this light, so care must be taken that the chimneys do not fit too tightly and that they are protected from sudden changes of the atmosphere. In exposed situations it is advisable to use tall chimneys with mantle-protectors fixed over them. Dust on the mantle or in the burner is a great destroyer of light; when the chimney is removed for cleaning, the dust should be blown carefully from the mantle and burner. The jet of the "bye-pass" will clog up if it is constantly used and the gas is inferior; it should be cleaned with a fine needle. The light from the burner will diminish after about 1000 hours' burning, by shrinkage of the surface of the mantle and deterioration of the substance. Whenever the mantle becomes broken or ragged the light fails, but if the gas is turned down to about half the usual supply, a better light is often given. Looked at without a globe, the flame should not show above the top of the mantle; any red, blue, or yellow flame in the chimney above the mantle or from any hole torn in it is gas escaping to waste.

LAMPS.

There are many kinds of lamps; those actually in use include varieties for burning colza and other vegetable oils, spirit lamps, and the ordinary petroleum house lamps. All, the most primitive as well as the latest improved pattern, produce artificial light in the same manner—that is, by the combustion of an inflammable liquid brought into contact with the air by means of a wick.

Spirit Lamps.—Among dangerous and obsolete lamps may be classed the spirit lamp. This is useful as a heater, but inefficient and dangerous as a light, especially when used with benzoline. Its employment is not to be encouraged. Reading-lamps of the "Queen" pattern, which maintain the oil at a constant level and are furnished with incombustible wicks, are satisfactory if properly attended to, but the care of them should not be left to servants.

Colza Lamps.—The colza-oil lamp is now little used; it is expensive, and inferior to the best petroleum lamps.

Petroleum Lamps.—The first requisite in a petroleum lamp is safety. Luckily this point has been so much insisted upon of late years that nearly all the better quality lamps now made may be regarded as safe, provided ordinary care be observed in using them. Cheap lamps still leave much to be desired, and must not be purchased at random. Metal oil reservoirs are less liable to break than others. Glass reservoirs are sometimes chosen for their appearance. They have two advantages; they are not so liable to heat as metal, and the amount of oil in them can be seen. Small lamps, particularly hand-lamps, should be of metal.

Precautions.—Lamp explosions are due to the firing by the flame of vapour arising from the oil in the reservoir. The heat of the flame causes oils having a low flash-point to give off an inflammable gas; as long as this gas is contained in the reservoir with the oil no explosion will result, unless the flame, a spark, or a smouldering fragment of wick reaches the gas. To prevent this, the wick tube is continued well down into the oil; and the wick should fit the tube exactly. Oil on the reservoir will be converted into gas in certain circumstances, and this gas ascending to the flame may be fired and the explosion outside communicated to the gas inside the reservoir, but more probably it will merely burn in the chimney.

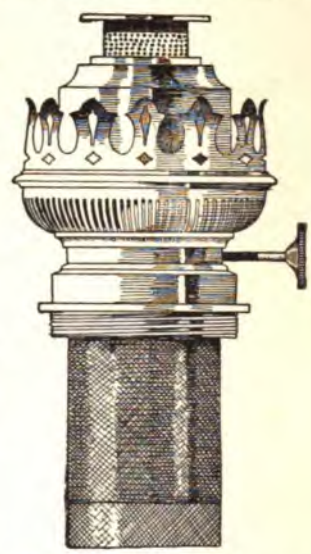


Fig. 107.—Lamp Wick-holder, continued into reservoir, and surrounded with wire-gauze.

As the gas generated by the heat always accumulates in the reservoir, each lamp should be refilled every time it is used, in order that the oil may expel the gas. Opinion is divided as to the advantage of a separate opening into the reservoir for refilling. There is no doubt that it is convenient, and helps cleanliness; it also prevents a lamp's being filled right up to the burner, and, if properly stoppered, it is not really dangerous.

Choice of Lamps.—For perfect safety the wick-holder, besides being continued well down into the reservoir, should be surrounded by fine wire-gauze (fig. 107), such as is used in miners' safety-lamps. There should be a proper extinguisher, and the lamp should have a heavy base broader than the diameter of the oil reservoir. A shallow, wide reservoir is better than a narrow deep one.

The illuminating power of the lamp depends upon the burner, and for economical purposes it is necessary, firstly, that the right proportion of atmospheric air should reach the burner at the point of combustion; secondly, that the oil at the point of ignition should be of the right temperature. No two tests give identical results, but with exceptionally good

conditions 41 grains of oil will be consumed in an hour for each candle-power, whereas common lamps will consume upwards of 70 grains to generate the same light.

To obtain the supply of air a draught is caused by affixing a chimney; there are also chimneyless lamps supplying the air by independent mechanism, as the well-known "Wanzer", or through a burner shaped for this purpose, as in the "Criterion"; but these are inferior to lamps with chimneys.

One of the best-known burners is the "Duplex", dating from 1869. To get more light two wicks, giving two distinct flat flames (fig. 108), have

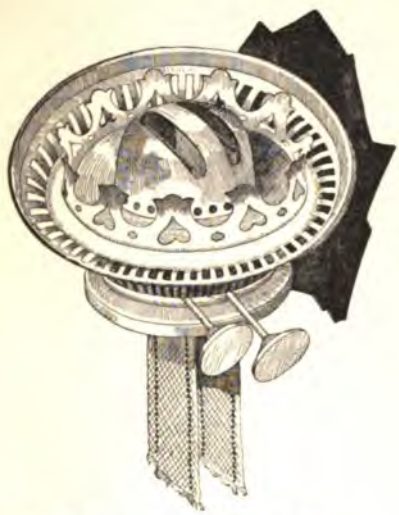


Fig. 108.—Lamp Burner, for two wicks.

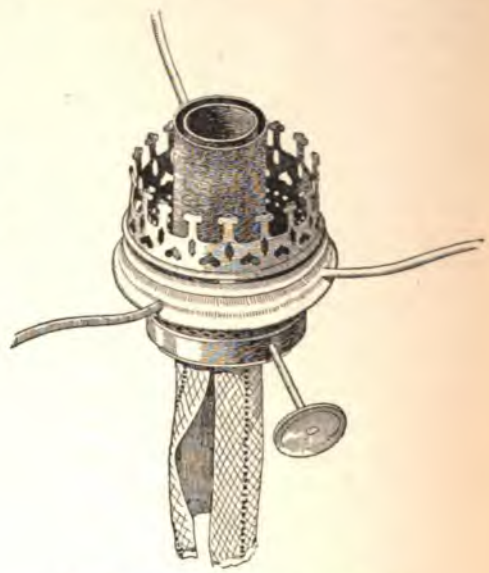


Fig. 109.—Lamp Burner, for circular wick.

been used with success, but later Sepulchre's patent of 1881 showed the way to the use of a circular wick with an inside air-draught and complete combustion (fig. 109). The well-known "Lampe Belge" is an example. An advantage of these lamps is that they burn heavy-bodied oils,—the "Deffries" has burned oil having a flash-point of 270°,—thus reducing the risk of explosion. Ordinary lamps of this kind can be made to give 25 to 35 candle-power, and hanging lamps for large rooms (fig. 110) as much as 100 candle-power. They are more susceptible to draughts than ordinary lamps, but with average care give a fine steady light, and burn for ten hours without requiring attention.

There is little to be gained by having lamps with hinged chimney rings; it is almost as easy to remove the chimney for lighting, and the ordinary fastening secures the chimney better.

Hand lamps with metal reservoirs—copper looks and wears well—are very cheap, and, with properly fitted wicks, are safe. A hurricane lantern is useful almost anywhere, and for the hall a lantern from the ceiling is

as safe as a bracket lamp; the latter is useful on landings and in passages. Care should be taken that all have single burners screwing into the reservoir.

Lamps on ring-brackets from the wall, and good pillar lamps, are best for the drawing-room. Floor lamps, although undoubtedly beautiful, lack stability, especially when made with adjustable extension and fitted with a heavy fringed shade.

A capital reading-lamp, adjustable to various heights, on a standard with a triple-claw base, is now easily obtainable in various sizes and patterns.

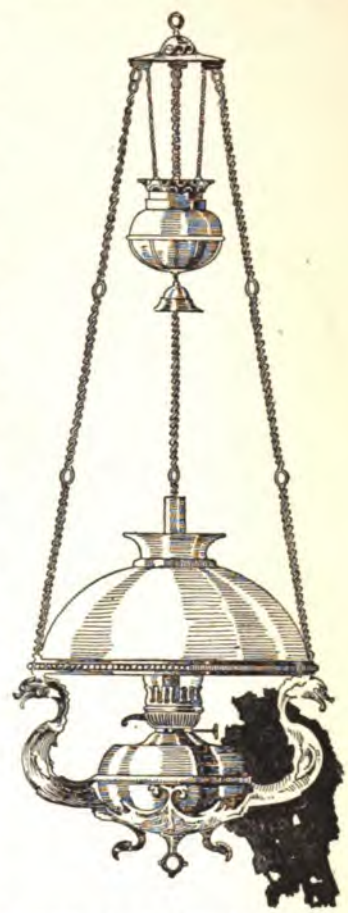


Fig. 110.—Hanging Lamp, for large room.

Care of Lamps.—Wicks should be cleaned and fitted and lamps refilled by daylight. Wicks should be soft, plaited—not woven—quite dry, and fitting the holder exactly. To make them burn without smoking, they may be soaked in strong vinegar, and then thoroughly dried before use. The wicks should be long enough to reach to the bottom of the reservoir, but not long enough for the ends to turn up. Care should be taken that the wick is thoroughly saturated with oil before the lamp is lit. To fill the reservoir a can with a long thin spout should be used. The reservoir should be filled every time the lamp is used, and after use the lamp should be thoroughly cleaned and made ready for the next occasion on which it may be required.

For trimming the wick it is best to use proper lamp scissors, having a snuffer-like attachment to retain the charred wick cut off. To ensure a regular flame, cut to the shape of the dome over the burner; a circular wick should be absolutely flat. Care should be taken to wipe away all oil, dirt, and bits of wick, and to let the outside of the lamp reservoir dry thoroughly before lighting. The wick should be turned down a little after lighting, and then slowly raised. Whenever it will not reach the bottom of the reservoir a new one should be supplied.

Dirt should be removed from chimneys with a dry cloth, or, if necessary, with one moistened with alcohol; in the latter case, the chimney should be wiped with a felt cleaner or soft cloth, and be thoroughly dry before being used.

If a lamp smokes, the wick is either too high or unevenly cut. Smoke

proves the supply of air to the burner to be insufficient or unequally distributed; this may arise from the open work below the burner being clogged with dust and dirt.

When carried alight, the lamp should be held on one side of the body so that the light may be on a level with the bearer's shoulder, the wick having previously been turned down. It will then be possible to see clearly ahead, avoid obstacles, and get clear of the lamp if it should happen to break.

Lamp Accidents.—Explosions are easily prevented; but with proper oil and well-made fittings, if the oil-reservoir is broken the oil will not explode, and, in most cases, will not even take fire. A dry cotton cloth, if nothing better is at hand, thrown down over the burning wick will at once extinguish it. Some lamps are so made that, if they are turned over, the extinguishers act automatically; and these extinguishers, adaptable to any lamp, may be purchased for one penny. If from any cause—as the use of inferior oil, ill-fitting wicks, dirty burners, or worn-out wicks—the flame descends into the wick-tube and reaches the oil-reservoir, a great volume of smoke and flame will shoot up towards the ceiling, bursting the chimney, and perhaps the globe too. The flame should be smothered at once by throwing over the lamp any woollen cloth at hand, the globe being broken if necessary in order to get the cloth close over the flame. The flame is easily smothered if this is done at once.

In any case water must not be used to put out burning petroleum.

Lamp Oil.—It is difficult for any but experts to decide as to the quality of lamp oil except by the lamp's burning. A good safe oil of 0·800 specific gravity can be obtained almost anywhere. The flash-point of heavy-bodied expensive oils will be found well over the Government minimum. It is the cheap American oil that fails in this respect. The best petroleum is almost as clear as water, but when seen in bulk or held up to the light in a transparent vessel has a bluish tint. A brown tint indicates an inferior oil.

The cheapest way to buy oil is in metal drums fitted with key taps. Oil by the barrel may be cheaper per gallon, but the barrel seldom contains as much as it is supposed to do; not infrequently taps leak, and, unless carefully stored away under lock and key, the oil is apt to be used extravagantly. The filling-can should be kept in the outhouse with the oil. If an ordinary oil-can is used, and the supply is taken regularly at frequent intervals, the can should be furnished with a screw stopper, not the common cork one.

The oil should be stored where least likely to come into contact with fire, but it is equally important that the barrel or drum be placed in a good light, so that the can may be filled without risk of overflowing. A tin to catch the drops running from the tap after use should be employed; the oil so collected will serve for lubricating, and the odd jobs for which a few drops of petroleum are found so useful.

Illumination.—Extra light for special occasions may be supplied by candles placed before mirrors, fairy lamps, and night-lights in "Vauxhall"

lamps. Fairy lamps in any colour cost from one to two shillings each, according to size, and are useful in lighting passages where it is convenient to have some light all night. Vauxhall lamps cost 1*s.* 6*d.* a dozen; candles, to burn four hours, a halfpenny each; these and "fairy" lamps are very effective in conservatories, and less dangerous than the Chinese lanterns employed for like purposes.

ELECTRICITY.

It is generally admitted that the electric light is the best artificial illuminant. Its one disadvantage is its cost. This varies, more nearly approaching that of gas when, as with gas, the supply is taken from the mains of a company, and being most expensive when the current has to be produced by the consumer. In the latter case it may be generated by primary batteries, but at present this system is very expensive and most unsatisfactory. In fact, such lights are really of the nature of laboratory experiments or scientific toys.

Fitting Up.—The plant necessary for lighting a house comprises a motor, a dynamo to generate the current, and secondary batteries to store it and provide a reserve. When water is available to work the motor, the cost of installing a plant equal to generating a current for fifty lights will be about £350. If an oil, gas, or steam engine is required, the first cost will be slightly greater, and there is the expense of working besides. The electric light, therefore, is not suitable for small country houses. For very little extra cost a much larger installation can be made and maintained. In mansions, where 250 or more lights are fixed, the current will cost probably one shilling per Board of Trade unit, which is about double the price ordinarily charged by the supply companies.

In town and suburban houses, where electric mains are available, the first cost is only that of wiring the premises and providing the fittings. The tendency at the present time is for the companies supplying the current to put in all the necessary fixtures—wires, switches, fuse-boxes, and fittings other than lamps and holders,—and to charge the consumer a yearly rent for their use in addition to the payment for the current used. If the consumer has to fix these necessaries at his own cost, the expense will be about 30*s.* a light for from ten to twenty lamps. The holders, brackets, pendants, and removable fittings are not much more costly than those for gas, quality for quality, and may be obtained in many elaborate and artistic styles. Plain bracket-holders cost from 4*s.* to 15*s.* each; cord pendants from 5*s.*; clusters, for ceiling lights, from 10*s.*; table lamps from 12*s.*; hall lanterns from 25*s.* The incandescent lamps cost about 1*s.* 6*d.* each if of 8 candle-power; a good quality 16 candle-power lamp may be had for 1*s.* 9*d.*, and lamps on the incandescent principle are made in sizes of 5, 8, 16, 25, 32, 50, 100, and even 1000 candle-power, so that there is no need to use the more troublesome arc lights for domestic purposes. The ordinary lamps burn for about 1000 hours; there is also a "high efficiency"

incandescent lamp made which uses less current per candle-power, but has a shorter life—about 300 hours only.

The only economies the householder can practise in respect of electric lighting consist in preventing waste. Suitable lamps for the voltage supplied should be chosen, and lamps of 5 candle-power used in the lavatory and passages; it is also better to have an extra small lamp which can be brought in to supplement the ordinary chamber lights than to use one light of great power. Care, of course, must be taken to switch off all lights immediately they are not needed. There is not likely to be any loss from leakage if the wiring has been well done, and there is now little if any danger from fire, provided that the fittings comprise, as they should, a fuse-box to cut off the current if received at too great pressure.

Electric Measurement. — In measuring electricity the quantity of current is reckoned in ampères, and the unit of pressure is the volt; the product of an ampère multiplied by a volt is called a watt. One thousand watts make 1 Board of Trade unit; therefore, 10 ampères at a pressure of 100 volts, or 5 ampères at a pressure of 200 volts, alike constitute 1 unit, according to which measure the current is sold by the supply companies to consumers. The current is usually supplied for household purposes at a pressure of 100 volts, at which pressure a lamp of 16 candle-power requires 6 ampères of current to light it. The electric meters used must be of the type and quality approved by the Board of Trade, and should record within one per cent the actual current passed.

Cost from the Main.—At the large generating stations the cost of producing the current varies from 1*d.* a unit only, the approximate cost at Edinburgh, to 6*d.* or more. At Edinburgh the price to consumers is from 3*d.* to 4*d.* the unit for lighting, and from 1½*d.* to 2*d.* for heating. In London and elsewhere the average price is 6*d.* the unit. Sometimes the price is varied, the maximum being charged for night use and the minimum during the day. To induce consumers to use electricity for other purposes than lighting, reduced prices are charged, either by allowing a percentage after the consumption of a minimum quantity during a term, or by supplying separate meters, or by a "demand indicator" as used in St. Pancras and at Brighton. In Westminster the reduction allowed increases from 1 to 16 per cent according to the quantity taken. By the "demand indicator" plan the maximum amount of current used at any one time is registered; the consumer is charged for the current at the maximum rate per unit until the account payable equals that required for his "demand" quantity for the half-year, after which all electricity in excess is charged at the minimum rate, sometimes not more than one-fourth of the maximum. This plan is based upon the assumption that consumers ought to pay more in the evening for the convenience of having a practically unlimited supply for, say, two hours, to all lamps at a time when the call upon the generating station is heaviest.

Each lamp of 8 candle-power will require about 16·8 units a year, the average time of burning being reckoned at 600 hours in the year, and

so will cost 8*s.* 5*d.* at 6*d.* the unit. To light an eleven-roomed house, 176 candle-power is ample, and the bill for current consumed should be about £9, 5*s.* 2*d.*, or about 6½*d.* a day for the electric current alone. If a London house contains ten lamps of 16 candle-power and twenty-five of 8 candle-power—a fair average—probably seven of the larger and fourteen of the smaller would be alight at least 600 hours in each year, and the remaining lamps, as in bedrooms, bathrooms, about 400 hours; they would then consume 660 units, which at 6*d.* the unit amounts to £16, 10*s.*

ACETYLENE.

The gas which results when calcic carbide is brought into contact with water burns freely, giving a brilliant pale-yellow light. Its manufacture is so simple that it is likely to be extensively used as an illuminant, and, since it generates great heat when used with an atmospheric burner, it seems well adapted for cooking and other domestic purposes. It is less poisonous than coal-gas, but more explosive. Its explosive quality exists even when the proportions are one part of gas to twenty of air. It must not be liquefied or condensed. For safety it should be used at little more than atmospheric pressure. Its light is bright, and it burns steadily, the small size of the flame causing it to cast sharp shadows.

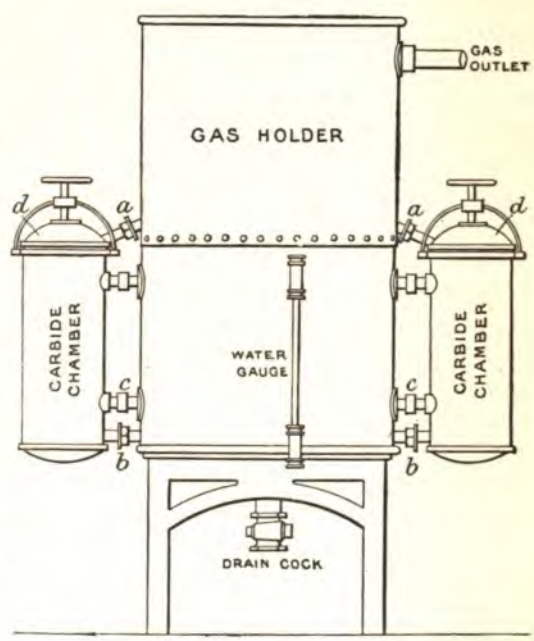


Fig. 111.—Acetylene-gas Generator.

a a, Gas-inlets to holder; *b b*, water-inlets to calcium-carbide chambers; *c c*, supports for calcium-carbide chambers; *d d*, removable chamber-covers.

Acetylene gas is suitable for use in country houses, and still more so in suburban houses already fitted with pipes, but situated at a considerable distance from the district gas main. The claim made for it that it costs less than other illuminants, coal-gas for instance, has not been substantiated. At present its cost is about equal to that of coal-gas purchased at 2*s.* 6*d.* per 1000 cubic feet.

The cost of the plant for making and storing acetylene gas in quantity equal to that passed by an ordinary ten-light meter is only about £20. The generator and storage-tank consists practically of an iron cylinder

about 4 feet in diameter and 6 feet high, and therefore will stand in any outhouse.

The form of generator in which calcic carbide is passed automatically into water is better than that in which water is supplied as required to a mass of calcium. The excess of water in the former keeps down the heat arising from the chemical change, and although a larger quantity of lime is formed, this residuum soon settles at the bottom of the tank and can be easily withdrawn by a waste tap. Such a generator requires little attention; an occasional addition to the water, and a periodical drawing off of the lime, is all that is necessary beyond keeping the feeder supplied with calcium. A carbide which will not produce 4·66 cubic feet of acetylene per lb. should be rejected, or purchased at a price according to the actual amount of gas yielded by it.

Calcium carbide is usually delivered in hermetically-sealed cans in quantities up to 100 lbs. To be safe, it must be pure. Care must be taken to keep the generator supplied constantly; when the tank is exhausted, there is a possibility that atmospheric air will be admitted and an explosive gas produced. The generator must be adequately protected from frost. The carbide should be stored in a dry place, and every care taken that naked or other lights are not carried near the generator or the building in which it is placed.

Acetylene lamps and lanterns are in common use for bicycles and carriages, and for similar purposes. As at present made they cannot be recommended for use indoors.

Insurance companies regard them with suspicion. In all cases, whether lamps are used or the gas is produced in a generator, the consent of the company insuring against fire risks should be obtained and the policy endorsed.

DRAPERIES AND HOME UPHOLSTERY.

CURTAINS AND DRAPERIES.

Choice of Materials.—The consideration of curtains and draperies may be conveniently divided into three stages, viz. choosing, making, and fixing. Each stage is important; perhaps the most important is the first. The material must be suited to the purpose, otherwise no amount of care or skill in the construction will produce a satisfactory result.

For wall or floor covering, where the surface is plain, design is almost essential; but in curtains, as the fabric is gathered into folds, softness of texture counts for more than design. In many furnishing houses inexperienced salesmen ignore this consideration, imagining that colour and design, although associated with hardness of texture, will yet make graceful hangings.

In the time of our mothers and grandmothers the choice of curtains was a very easy matter, because the range of materials was extremely limited and the ideas regarding household decoration were eminently simple. Now the range is infinite, and public taste during the last generation in matters connected with furnishing has advanced enormously. Moreens, reps, old-fashioned damasks and chintzes, with their stiffness of texture and crudeness of colour, are out of date, their places being filled by velvets and plushes, tapestries and cretonnes, serges and muslins, in almost confusing variety.

When dealing with the making and fixing of curtains, it will be necessary to consider separately the dining-room, the drawing-room, the bedroom, and the hall. In the matter of choosing it is convenient to follow the same order.

If furnishing throughout, go to a good firm, where not only value for expenditure, but also skilled advice and assistance in the selection of the various articles, can be relied upon. Procure patterns of the carpet, the furniture, and the wall-coverings, and with their aid make a selection of the most suitable materials for curtains. Before finally deciding, when practicable try the effect in the apartment where they are to hang.

In the dining-room, which may also be the sitting-room, a good solid material and colouring is the most serviceable. A pretty effect may be obtained by either harmony or contrast. It is a good plan to introduce as much variety as possible into the different rooms, as this secures a complete change in going from one to another.

If harmony is decided upon, select the dominating colour in the carpet,

which may be reproduced in a lighter shade on the walls. Make this the shade of the curtains, if the material is plain; if figured, let it be in the body-colour, the pattern being formed by a lighter shade of the same colour.

Charming effects may be obtained by skilful contrasts. For example, a dark-blue carpet and walls go well with terra-cotta curtains, or *vice versâ*; or a lighter blue may be associated with brown or gold. The various shades of olive-green combine with almost any modern colouring, while deep-crimson and maroon may be contrasted with buff or brown or gold. Should any doubts exist concerning the effect of a contrast, study a good tapestry or carpet in which the colours are blended by skilled artists.

For dining-room curtains at a moderate cost, nothing is better than a heavy all-wool serge. It requires no lining, and may be had in $\frac{6}{4}$ and $\frac{8}{4}$ widths, which may here be interpreted as one and a half and two yards wide respectively. The greater width should invariably be selected, for curtains always look best when hanging in full folds.

Soft tapestries, various kinds of velvet, plushettes, and chenilles, are all suited for dining-room curtains. Avoid the cheap jute fabrics; the colouring is fugitive, and the weight causes them to tear at the top. Moreover, this class of material never can be made to hang gracefully.

For drawing-rooms the lighter makes of tapestry, plush, Roman and other satins, cretonnes, and the finer makes of damask are all suitable.

For bedrooms, cheerful hangings should always be selected. The necessity of frequent washing or cleaning, however, should be borne in mind, as the atmosphere of the bedroom, where so much of one's time is spent, should be kept as pure and sweet as possible.

Washable muslins, lace, and net are always suitable here, together with pretty dimities, chintzes, cretonnes, and—perhaps most suitable of all—art linens. The last are made in about twenty artistic shades, and never change colour; it will be seen subsequently what pretty effects may be obtained with them for bedroom hangings.

The hall may be draped with material similar to the dining-room. Here, however, draught-excluding properties are necessary, and in view of the style which will be recommended for hall curtains, a thick, soft, heavy material should be selected.

When choosing lace or muslin curtains, always give a preference to soft ones, as the graceful styles of draping here illustrated will be quite unattainable if the curtains are of a starchy nature.

Curtains should never be selected hurriedly, as if they were an unimportant matter. Nothing adds so much to the comfort and beauty of a room as graceful drapery. Every lady should study the subject well beforehand, look at her friends' curtains, discover their excellencies or defects, educate herself on the subject, and when she goes to the upholsterer's, if she does happen to fall into the hands of an inexperienced salesman, she will be able to decide for herself what she wants.

Dining-room Curtains.—For making curtains it is necessary to pro-

cure—in addition to the material—lining, and fringe (if they are required), suitable thread, hooks, and a piece of chalk, which may be bought at the tailor's. A three-foot rule for measuring is also useful.

A simple pair of serge curtains, trimmed with an edging or ball-fringe, is suitable for the dining-room. They should be cut squarely, five inches longer than the height of the pole from the floor. A simple plan for "squaring them" (as it is called) is to lay the material on the kitchen table, and, after arranging it so that the edges correspond, to draw a line across at the top and bottom with chalk. The floor-cloth in the hall, or even a square of carpet, may be utilized for the same purpose.

If the fringe has a double or binding heading, sew it round the two sides and bottom of the curtain; if there is only a single heading, baste the edges of the curtain, turned over on the right side, and sew the fringe over it. Care must be taken not to tighten the fringe in sewing, otherwise the edge of the curtain will have a drawn appearance. As it must be put on easily, about half a yard more of the fringe will be required, with some materials, than the actual measurement of each curtain. The next thing is to cut a tape of the width that the curtain will be when finished. Make a heading by turning down about two inches of the curtain at the top, towards the wrong side, and running a drawing-thread through it; the thread must then be pulled in to the length of the tape, and fastened securely. Lay the tape along the rough edge of the heading, and sew it on with a row of stitches along each side, being careful to see that the gathering is done regularly. Sew on the requisite number of hooks, and when any creases that may have appeared have been ironed out, the work is finished.

When the fringe is dispensed with, a broad hem, or a wadded edge, may be substituted. The latter forms an effective finish for dining-room curtains, and is made in the following manner: Draw a straight line two inches from the edge, which should be turned over to this line; insert a small roll of wadding, and baste it down. Over the joining sew a flat gimp or heading, which can be obtained from an upholsterer. Should a nicely trimmed border be desired, sew on a row about three inches from the first, as in fig. 112.



Fig. 112.



Fig. 113.

A curtain may be made very pretty and original by the addition of embroidery, such as a small sprig design, running round between the two rows. Fig. 113 illustrates another method of using embroidery. A dado of

figured or plain velvet may also be inserted, but this has to be done very carefully, the velvet being laid upon the serge; unless the object is to increase the length, when the two materials are seamed together and afterwards lined. Should the curtain be from three and a half to four yards long, a seven or eight inch frieze about five inches from the top would be an improvement.

Any of the other materials mentioned for the dining-room should be made up similarly, the embroidery being omitted.

Drawing-room Curtains.—In the drawing-room there is more opportunity for variety of design. A suitable pair of curtains may be made of tapestry or any of the other fabrics already suggested. They should be lined, and, if the tapestry is very thin, interlined with some cheap soft material. In this case the fringe should



Fig. 114.

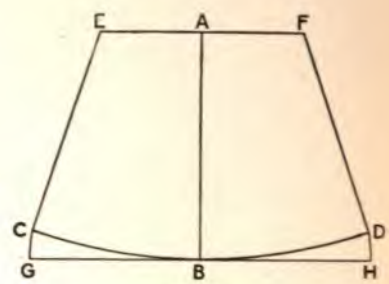


Fig. 115.

be sewn to the tapestry, and the lining then hemmed all round the heading of the fringe. To avoid dragging, the latter must be put on a little full.

A graceful way of draping a straight window is shown in fig. 114. In this design the pole is used for suspending the drapery, and a small separate rod is fixed behind for the curtain. This drapery, apparently in one piece, is really composed of four. Anyone who knows how to make it will know how to make almost any kind of drapery. For this reason the method is described in detail.

First of all determine the width and depth of each part. In ordinary cases the deepest festoon should be about one-fifth the height of the window. Take a picture-chain and measure the top and bottom line of the space to be occupied by this festoon, cut off a piece of material equal in length to the bottom line and in depth twice the finished size, as shown in fig. 115. Let A B equal twice the finished depth, G H the bottom line, and E F the top line. The bottom is shaped by drawing from point B with radius B G the arcs G C and H D. On these arcs make G C and D H a sixth of the distance of B from G or H. Produce the perpendicular A B through A. Find a point in it and a radius that will describe the arc C B D, and the festoon is

ready for cutting. This rule is applicable to all festoons, except such as are of very irregular shape, which had better be left to the professional.

The tails are very simple; they may be made any depth, and are shaped as in fig. 116. Of course, one must be cut for the right and another for the left. Each when extended should measure in width at least four times the pleated size. The bottom line may be more or less oblique according to fancy. A very good rule is to have it at an angle of about 45° to the sides. Apply the fringe and lining, pleat up the tails, draw up the sides of festoons C E and F D to a space of about six inches, and then join the various parts over the pole as represented in fig. 114. In such a design it is advisable to arrange one curtain high and the other low, in conformity with the lines of drapery.

Variations may be obtained by making the festoons of equal size, raising the centre,

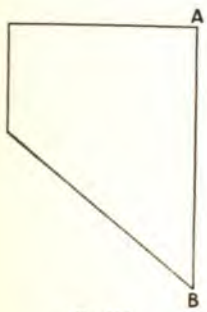


Fig. 116.

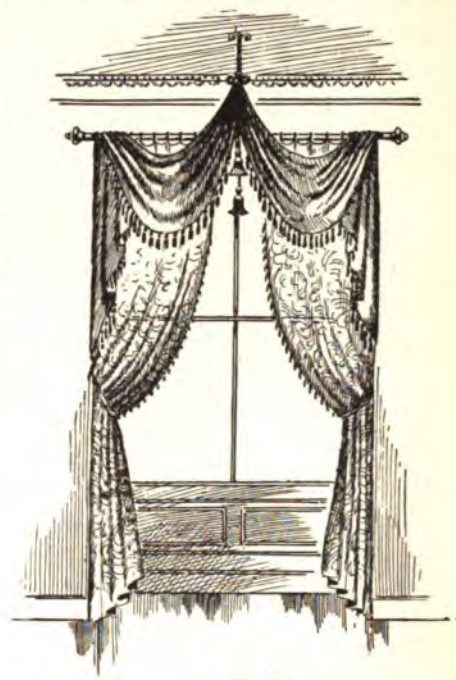


Fig. 117.

and holding it up with a cord and tassel depending from the ceiling, as in fig. 117. In the case of a wide window, three festoons either of equal or of unequal width and depth may be introduced.

In fig. 117 the small additional rod for the curtains is dispensed with. They are suspended from the pole, and where the drapery coils over the pole at the ends they are fixed to hooks fastened to the architrave.

A neat way of suspending the cord from the ceiling is to procure an electric-light fixing of copper or brass. It should be attached to the ceiling two or three inches in front of the line of the pole, so as to allow the drapery to hang freely.

In making up draperies one should be careful, when sewing on the fringe, to avoid stretching the bottom line, and to draw it in very slightly, otherwise the form of the bottom fold will be bad.

Curtains for Oriel Windows.—The oriel window now so common, although by the amateur considered a formidable undertaking, is simply

a combination of several straight windows. Fig. 118 illustrates a simple way of treating one. The design consists of a geometrically-shaped valance with a succession of tails. It may be shaped at the bottom simply or elaborately, but in either case the design should be made to correspond with the various angles of the window. It is fixed to the front of a lath four inches broad, from the under side of which the curtains are hung, the pole being fastened in front as a finish. A thick cord, or a frilled or other heading, may be substituted for the pole without detriment to the design.



Fig. 118.

Fig. 119 represents a festooned drapery suitable for an oriel window. Instead of being thrown over a pole, as in fig. 120, it is tacked to the front of a lath. When simplicity is wanted, the tassels and the tails, except at the outside corners, may be omitted.

Fig. 120 shows how to make up draperies for coiling over oriel poles. The tails here, and at the inside angles of the festoon in fig. 119, are shaped like those in fig. 116 doubled, A B being the centre line.

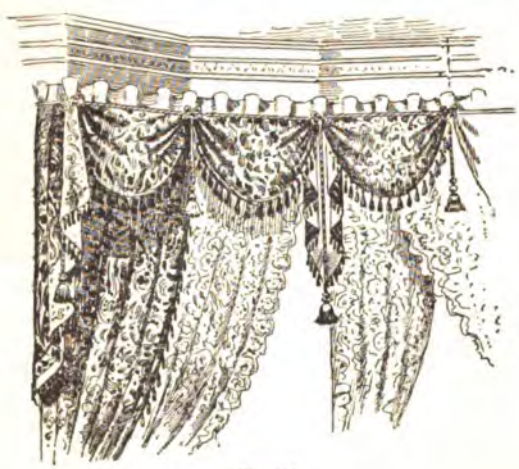


Fig. 119.

Hall and Door Curtains.—In rooms with draughty



Fig. 120.

doors, a curtain fixed to the inside is a convenient arrangement. Moreover, if artistically made, it is very effective. These door curtains may be plainly made of serge, diagonal-cloth, tapestry, or velvet. Embroidery may be

added if something more elaborate or fanciful is required. The curtain shown in fig. 122 is a good one for the purpose. It can be easily raised or lowered, the folds falling gracefully into shape without any trouble. It must be at least half as wide again as the door, and of a soft draping material. When in position it should merely touch the floor; if longer —unless suspended from what is known as a rising-rod—it will get underneath the door when opened.

When the curtain is fringed, before drawing up the head, spread it out flat on the floor, the wrong side up, from the top of the back corner mark B, distant 9 inches from A, and on the front let C D be equal to about 4 feet. Draw a line B D curving downwards from the straight about 6 inches, as shown in fig. 121, and on it sew small rings about 6 inches apart. Then draw up the head to the required size, and the curtain is ready for fixing. Place it in position, pass a piece of thin cord through

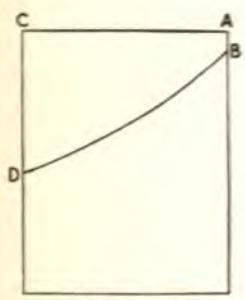


Fig. 121.

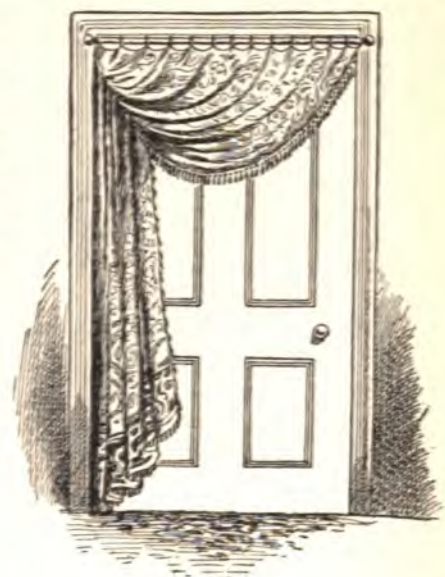


Fig. 122.

the rings fastening one end at D; at B, pass the cord through a screw-eye fixed to the architrave, draw the cord until the curtain drapes as in fig. 122, and make a loop at the end for fixing over a hook placed conveniently in the architrave. This hook should be near the floor; if it is too high, there will not be sufficient cord to allow the curtain to drop.

This method will be found satisfactory in the case of curtains either for a hall or for a sitting-room window, especially if they are frequently drawn. It prevents sticking, as often happens with a corroded pole.

Bedroom Curtains.—For bedroom windows everything should be fresh in colouring and dainty in design. Much drapery in the bedroom is sometimes disapproved, but upon the whole is regarded with favour.

Art linen is an ideal material for bedroom curtains. It is cheap, artistic, and fast in colouring. It is made in 36 and 72 inch widths, the price of the narrow width being half a crown a yard. These curtains may be made in any of the following ways:—

1. With a broad hem all round, the thread being of the same or a contrasting colour.

2. With a band of contrasting colour as a dado or a frieze.

3. With a border of a different colour, very much as in fig. 112.

4. With a broad binding of a different colour, or, should the curtain be lined with a contrasting linen, with the lining brought round the front to the extent of about 1½ inch.

5. With a small frill of the same material.

6. With a frill of a different colour.

7. With a small box-pleated edge about an inch and a half broad, either in the same colour or in a contrasting colour.

8. With a frill with mushed edge.

Other ways of finishing, such as fringing and embroidery, will occur to those versed in these matters. The examples that have been given, however, will probably be found to afford sufficient variety.

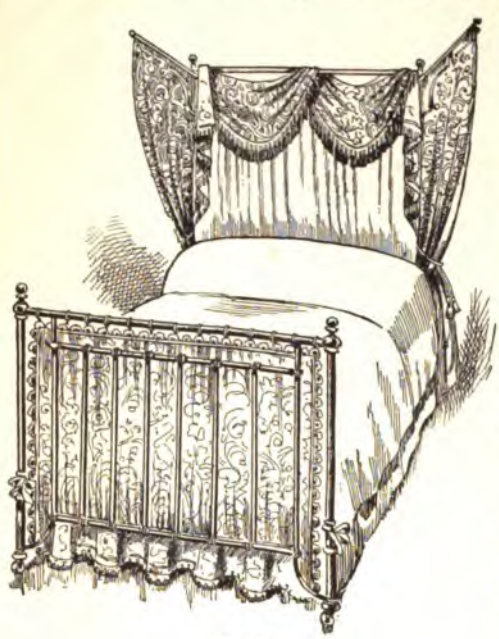


Fig. 123.

The foregoing remarks apply equally to cretonne, a material largely used for bedroom curtains. It can be bought at any price from about 6*d.* a yard, and should be lined to make it hang nicely.

Bedstead Curtains.—When dealing with the bedroom, some attention must be given to the bedstead. The ordinary or French bedstead is easily decorated by making head and foot curtains slightly full, with a caser and small heading at the top of each, through which a lath is passed, the curtains being gathered on to it, and fastened with tapes, ribbons, or clips. The sides or pands can be made up in a similar way, or gathered or pleated to a caser of the size of the bedstead.

A neater method is illustrated in fig. 123, which shows an Italian bedstead, a style largely used at the present time. Here the foot curtain is gathered in to the width of the bedstead at the top and near the bottom, bound round and hooked to small rings placed along the top rail. The lower part is pleated. At the junction of the drawing and pleating, a thin iron rod is attached so that the curtain may hang properly.

In many of these bedsteads a section of ornamental brass-work appears above the drapery. When this happens, it is advisable to make a skeleton wooden frame to which the drapery and background can be tacked, the

whole being secured to cross-bars at the head of the bed. Curtains for a bed of this description should be made with a double heading, V-shaped at the top, with small hooks between. This prevents the hooks from being seen when the curtain is in position.

Lace and Muslin Curtains.—An ordinary pair of lace curtains should be folded down about two and a half inches at the top, and a broad tape stitched along this line. A narrow tape should then be drawn through, or else inserted as the sewing proceeds. If one end is fastened and the other left protruding a quarter of a yard, the curtain can be gathered to any width when fixed in position, and drawn out quite flat for cleaning.

Madras and other muslin curtains are improved by frills, provided that the latter are put on properly. To give the proper fulness, the length of the material required for the frilling should be about double the length to be covered; it should be cut about five inches wide. Join the strips together and hem them on one side; then iron down about half an inch on the other side, run a thread through the turned-down edge, draw it up to the required fulness, and sew it to the edge of the curtain.

Muslin and all other thin, soft materials should be very full, thus securing a profusion of folds. They must be cut from one-third to half a yard longer than the window, since allowance must always be made for shrinking.

The best method of fixing lace and muslin curtains when they are used in conjunction with the heavier kind is to suspend them from a thin, half-inch brass rod with rings, made to pull up and down by means of cords. In the case of an oriel window the rod is made in two parts, bent to fit the angles. Screw eyes are placed at the angles and at the ends, and through each a cord is passed, one end being fastened to the rod, which can thus be raised and lowered as required. The cords are then attached to hooks at the sides.

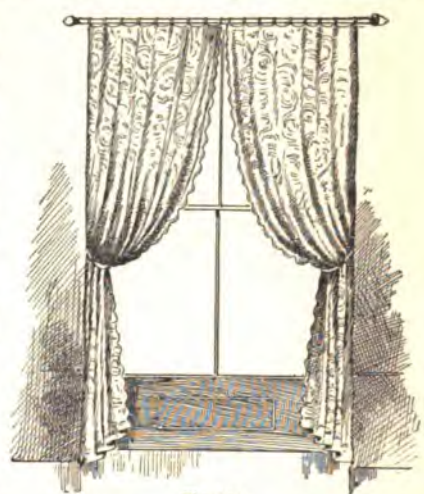


Fig. 124.

As lace and muslin curtains are universally used, a few hints and suggestions about the draping of them may be required. There is really no need for the prevalent uniformity. Fig. 124 represents the style of draping most commonly adopted. The draping may be uniform, as in the illustration; it may be higher or lower; or it may be high on one curtain and low on the other. The last method is specially suited for a corner window. In the case of two windows adjoining, the inside curtains might be draped high, the outer ones low.

Fig. 125 represents a totally different style, also suited for a corner window or for double windows. It is one of the very simplest ways of

draping curtains, and has this recommendation, that they may be instantly released from the folds and replaced as quickly.

Here, again, the left-hand curtain may be draped up to the pole or to any other point according to taste. Cross the curtains slightly and let them fall naturally on to the floor at the bottom. Take hold of the left curtain at a point about 3 feet from the top and half a yard inward from the outside edge; raise it to the end of the pole; and pin it in position, arranging the folds gracefully. Treat the curtain on the right in the same

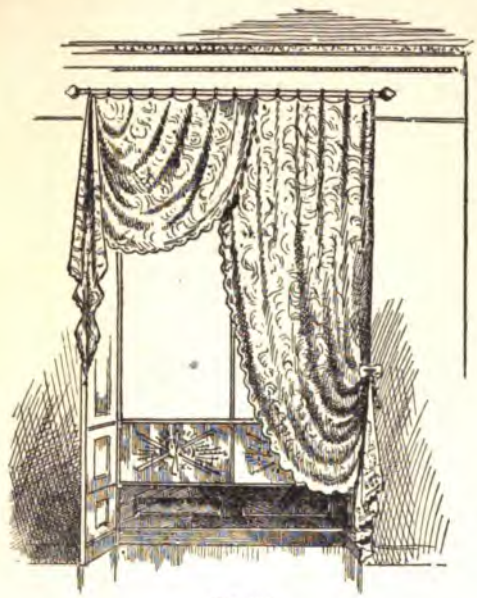


Fig. 125.

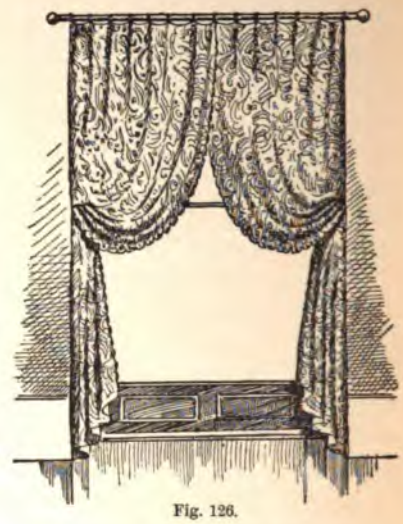


Fig. 126.

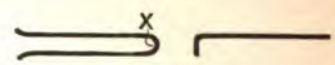


Fig. 127.

manner, but take it up at a point a yard from the bottom and half a yard from the outer edge. These points vary, according to the length, width, and amount of fulness in the curtain, but they are easily determined by experimenting until a graceful form is obtained. A bow of ribbon placed over the pin enhances the effect.

In fig. 126 is shown a very graceful style, and one easily carried out. There are two ways of doing so. The special feature is the long curve from the top to the back edge of the curtain, which, for this purpose, must be fine and soft. A special band or bracket made of brass or of iron covered with the same material as the curtain is necessary. A plan of the band is shown in fig. 127. Fix this band to the side architrave about 4 ft. 6 in. from the floor with the open end pointing from the window; fold the curtain in two, and gather it all in the doubled form inside the band, with the folded edge at the point marked x in fig. 127. Pull the front half over the band until a result like that in fig. 126 is obtained.

Another method is as follows. Determine the height at which the curtain is to drape; find by means of the chain rule the length of the

curved line from the pole to where it passes over the band at the outside, trace a corresponding line along the inner edge of the curtain in a straight line from the pole to the band, and make a mark on the curtain to correspond with the band, about half a yard in from the back edge. On the back draw a line between these two points, and over it sew a small caser of the muslin about three-quarters of an inch wide. Next bend a piece of very stiff wire to the shape of fig. 127, with an arm about 9 inches long, and fix it to the architrave of the window in such a way that it will pull out and yet be horizontal. To drape the curtain, gather the caser on to the wire (beginning at the front of the curtain), place the wire in position, and arrange the folds. Curtains draped in this style, which is very artistic, should be at least half a yard longer than the height of the window.

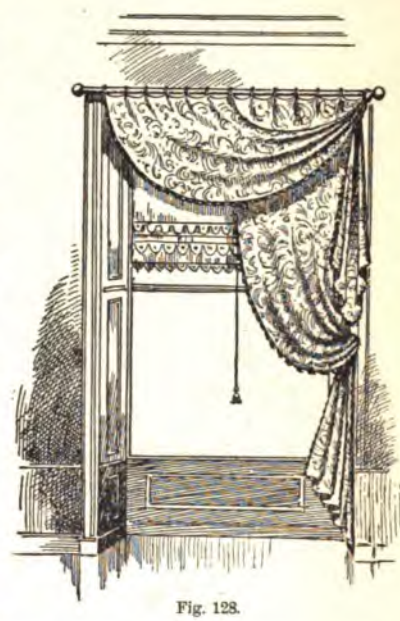


Fig. 128.

Fig. 128 shows a fanciful arrangement of a pair of ordinary curtains. The right-hand curtain has already been described; the one on the left is very easily arranged. Apply the chain rule again to obtain the lengths which the top and bottom curves should take, and mark points on the inside and outside edges respectively of the curtain. Along the line joining them draw a stout thread, taking a large stitch, and fasten it securely at the lower point. The curtain when gathered on to it should be attached to the outside ring of the pole. Variety may be introduced by adopting different styles of draping for the curtain on the right, by draping the upper curtain to the opposite side (in which case it should be hooked to the pole along the top of the under curtain), by fixing a tail underneath the drapery at the left corner, or by employing three curtains and draping the third curtain to the left at a different height.

By transposing the parts of the four examples given other variations are obtained. It would be easy to multiply them almost indefinitely. By taking ten different ways of draping a pair of window curtains and working out all the different transpositions it would be quite possible to vary the draping of a window every week throughout the year.

The next illustration (fig. 129) shows a simple way of treating an oriel window. Here, again, the curtains must have about half a yard of extra material in length and be moderately full. To drape them, take a point in the middle about a yard and a half from the bottom of the curtain, raise it until the curtain just touches the floor, and fix it in the angle between the windows. For this purpose a small screw eye in the wood-

work with a safety-pin attached to it is excellent. The back of the pin which passes through the curtain can be decorated with a bow of ribbon, or a cord and tassel.



Fig. 129.

The side curtains may be treated in any style that is preferred, but they should be draped at a different height by way of variety.

The arrangement shown in fig. 130 may be described as a combination of curtains and drapery. It has a more finished appearance than that in fig. 128, and, like most of the examples given, is easily constructed. Cut the curtains the required length and of a width proportionate to the sides of the festoon shown in fig. 131, that is, to the lines AC and BD. Either Swiss net or Madras muslin may be used, while for trimming, lace fringe or frill is equally suitable.

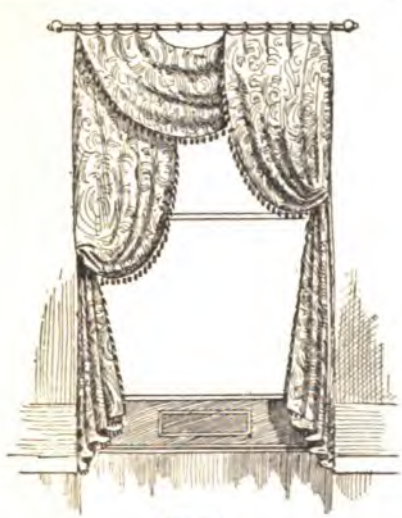


Fig. 130.

In fig. 131 the unmade festoon is shown. AB and CD represent the relative lengths of the top and bottom lines. The lower corners are slightly rounded, and the fulness in depth is about double. Join the three parts together with a

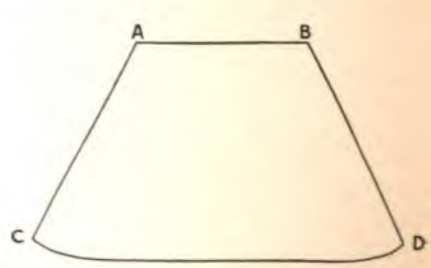


Fig. 131.

small caser at the top, through which draw a tape; pull the curtains drapery into the required width, and fix with pin-hooks.

In the case of a thin rod the tape may be dispensed with an

made sufficiently wide for the rod to pass through. In this way the draping appears to coil gracefully over the pole as if it were one piece of material. A distinct advantage which this style has over most other draperies is that it can be made to fit almost any average-sized window by simply extending or contracting.

A very simple and inexpensive way of draping an oriel window is to use straight rods for the various sides and centre, and drape the side curtains as in fig. 125 or fig. 126 and the centre as in fig. 129. This obviates the necessity for a bent pole and at the same time looks very well.

Before quitting the subject of muslin curtains, one word may be said about the cleaning of them. This in a large city is rather an important question, recurring as it does very frequently. Madras and Swiss net curtains are recommended, among other reasons, because they are very easily cleaned at home. The best process is to soap the curtains and let them lie in water all night, and in the morning to pass them through several waters without rubbing, and finally through a wringer. No starch should be used or all the gracefulness will be gone. They should be ironed when slightly wet. Cleaned in this way, they will look almost as good as new.

Sash Curtains.—Many of the modern houses with quaint styles of architecture are greatly improved by the introduction of neat sash curtains. These may be made in Madras and other muslins, in Tussore, corah, China or Liberty silk, or in merino, taffeta, or any other thin soft fabric.

A very pretty American style of arranging a window is to fix a silk or other curtain from a three-eight brass rod right across the upper sash, and a pair of the same curtains on a similar rod on the lower sash. By means of small rings they can be drawn back and forward easily.

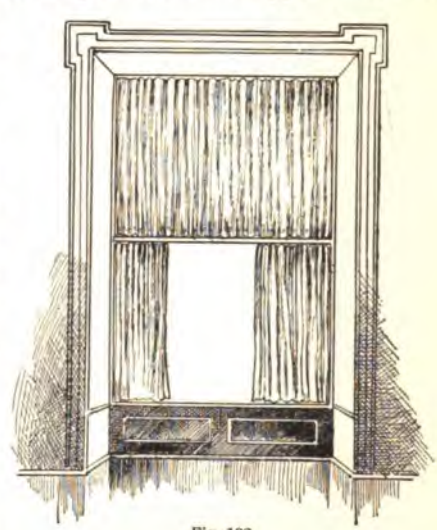


Fig. 132.

This arrangement obviates the necessity for a blind, and is much more artistic on certain windows than the stiff conventional holland. The side curtains may be draped if desired, in which case a small lace or fringe would improve the line.

An exceedingly simple method of draping is to suspend a common bent pin by a piece of ordinary thread about half a yard long, from each corner of the rod, and then to pass a point of the curtain over the pin, as in fig. 125. One advantage of this fixing is that the draping can thus be easily varied by drawing the curtain backwards or forwards, or by catching it up higher or lower.

Another way of draping a window is to hang the curtains from the top

of the upper sash, next the glass, allowing them to reach the sill. This arrangement makes a holland blind superfluous, but in this case they should be laced with cords for drawing them. This may be accomplished in the following manner:—Fix a round screw eye to the roof of the window immediately behind each end of the rod. Draw the curtains until they meet exactly in the centre; attach one end of a piece of thin cord twice the combined length and width of the window to the extreme left ring of the right-hand curtain, lead the cord through all the other rings of this curtain, and then through the corresponding screw eye. Next pass the other end of the cord back through this screw eye, allowing the double end to reach down towards the bottom of the curtain, carry the cord along (not through) the rings, and knot it to the extreme right ring of the left-hand curtain. Then carry it to the screw eye at the left side and pass through this and then through the rings of the left curtain, finally fastening it to the leading ring of the right-hand curtain. By means of this double cord the curtains may be pulled backward and forward at will.

Mantel-board Drapery.—At the present time any notice of draperies would be incomplete without a reference to the mantel-board. However severely a draping here may be criticised in some quarters, it is undoubtedly popular with ladies.

Fig. 133 shows the simplest of all mantel-board draperies, being merely a mat (fringed and, if necessary, lined) laid over the board, so that it hangs equally over the front and the ends. For the purpose half a width or three quarters of a yard is quite sufficient. A slightly different form is



Fig. 133.

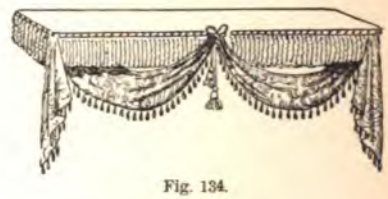


Fig. 134.

obtained by using wider material, say about a yard wide, and arching the front from corner to corner, the ends being treated similarly. Instead of an arched front a thread may be drawn perpendicularly through the centre from the fringe to the edge of the board, and then pulled up and fastened. With the addition of a couple of small tassels and cord, this makes rather a pretty drapery and gives very little trouble in the making.

With a long board and a soft material, two threads may be used at equal distances from the ends of the board, but each should slope downwards towards its own end, the distance at the bottom from the perpendicular being about an inch or rather more. This gives fulness to the central festoon by borrowing a little from each corner pleat.

Fig. 134 illustrates an excellent drapery in serge or tapestry with a fringe about 6 inches deep all round the board. Cut and fringe the festoons in the usual way, cover the board, and put round the deep fringe in a

check made on the front and ends of the board; next draw up the sides of the festoons, tack the ends of each, one in front and the other behind the fringe, place the tails in position, and sew a cord round with a knot over the top of each tail. Attach two small tassels, and the drapery is completed. Curtains may be added if necessary.

The correct way to cut a festoon that is to be combined with a fringe is to arrange the fringe in position and place the chain rule over it, allowing the top line to pass underneath the fringe. The deep fringe should be lined with a piece of the draping material, otherwise it will have a thin appearance. A drapery of this description would look well on a window.

If a deep fringe is not easily procurable, a valance of a contrasting material makes a good substitute. It may be shaped at the end as in fig. 135, and can be either panelled or embroidered, as illustrated, to redeem it from plainness.

The art of embroidering curtains, which a few years ago threatened to become extinct, is fortunately reviving. Some first-class upholstery establishments retain expert needle-women for this purpose thus securing originality and greatly enhancing the value of the work.

Serge, satin, and diagonal cloth



Fig. 135.

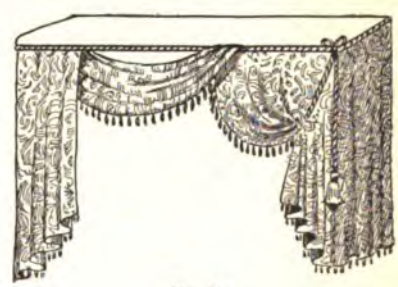


Fig. 136.

are specially adapted for sewn work, and with a tapestry or plush drapery are suitable for dining-room or drawing-room.

For bedrooms a linen valance embroidered in flax thread and draped with "Cumbrian" cloth in a nicely contrasting colour makes the daintiest of mantel-boards.

Fig. 136 is a concession to those who favour one-sided arrangements. Here there is no centre. The curtain on the left is shaped at the bottom as in fig. 116, and when pleated is fixed over the cord; that on the right is caught up with a hook and eye fixed respectively to the knotted end of a cord and to the curtain. The festoon is cut in the usual way and coiled over the cord. The best method of doing this is temporarily to attach the cord to the front of the board, pin the pleated festoon to it, cut the edges straight with the cord, and sew the two together. Remove the tacks from the cord, twist it slightly round until the ends of the draping are out of sight, and arrange permanently. Care must be taken to have the mantel-board top of thoroughly-seasoned yellow pine, otherwise when subjected to the heat of the room it will warp.

It is often convenient, where there is a mirror or overmantel, to cut out

a portion of the back part of the board about 3 feet long by about 1 inch wide. A separate fillet should be made to fit this space an eighth of an inch thicker than the board. It should be covered with the same cloth as the top of the board. The mantel rests upon the fillet, and the board, being slightly thinner, can be pulled away when cleaning is necessary.

The mantel-board curtains should be drawn in to about a yard space at the top, and the rings sewn to the top edge. This keeps the curtains flat under the drapery, permitting it to hang freely and neatly.

When fixing the curtains hang the loops from the front corner of the board; if they are taken to the back, the tendency is to pull the curtain out of the perpendicular.

A moulded front is greatly preferable to a covered mantel-board, but the cloth must be fastened over the moulding with strong paste. A plain half-round moulding covered separately and fixed on with needle points is a simple and effective way of treating the front of a board. Another way is to form a chamfer round the front and ends, with a check to receive the cord.

Piano-back Drapery.—In drawing-rooms nowadays the pianoforte is never placed with its back against the wall, and as the manufacturers have made no provision for this altered position, the back, which is sometimes very ugly, calls for some treatment. A simple curtain with an average amount of fulness, suspended from a small rod lined and fringed at the bottom, is an ordinary decoration for the back of the piano. An improvement on this is to run a row of braid across the curtain about 10 inches or a foot from the bottom. Another method is to embroider the curtain if plain. A thin material is preferable, such as "corah" or Liberty silk, made with ample folds. It does not decrease the tone of the instrument in the least degree.

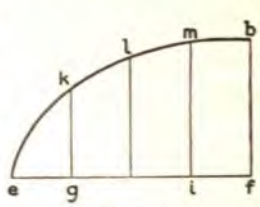


Fig. 137.

Other styles of piano-back draperies may be constructed from many of the foregoing designs, with the addition of a background.

Archway Curtains.—In many modern houses the arched portière is much in evidence. The simplest way of treating it is to fix a straight rod behind the arch and hang a pair of curtains from it. As this, however, is apt to spoil the look of the arch when viewed from behind, the following way may be recommended:—*e b f* (fig. 137) is a paper shape of half the arch. Divide *e f* into four equal parts, and at the points *g*, *h*, and *i* erect perpendiculars intersecting the arc at *k*, *l*, and *m*.

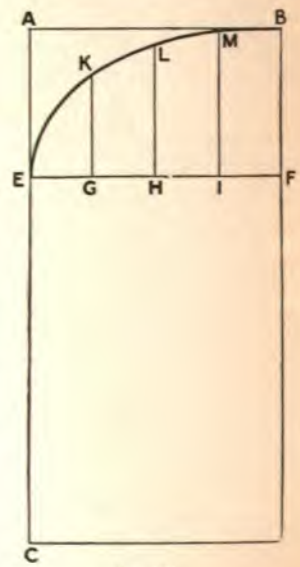


Fig. 138.

Now take the two curtains (cut to length, with 3 ins. added for the heading, and with sufficient fulness), and spread them out, the right sides together, as represented by A B C D (fig. 138). Make B F and A E each equal to $bf+$ 3 ins. Join E F, which is equal $ef+$ 3 ins. Divide E F into four equal parts, erect perpendiculars at G, H, and I, and make K G $=kg+3$ ins., L H $=lh+3$ ins., and M I $=mi+3$ ins. Trace by hand the curve E K L M B, and cut along it. Lay a piece of tape along the paper curve, marking it at the points e, k, l, m, and b, and cutting it so that there is an extra half-inch at e and b for turning. Transfer it to one of the curtains 3 ins. below the top E K L M B, this being the length allowed for the heading, and sew the points below E, K, L, M, and B respectively to the corresponding points on the tape. If the other curtain is treated in the same way, both will fit the arch exactly. A double heading is necessary, with hooks between; these may be fixed to screw eyes placed around the centre of the archway. The result will be much more satisfactory than the straight pole. A most effective way of treating a small archway is shown in fig. 139. This curtain may be easily constructed from the foregoing rules.

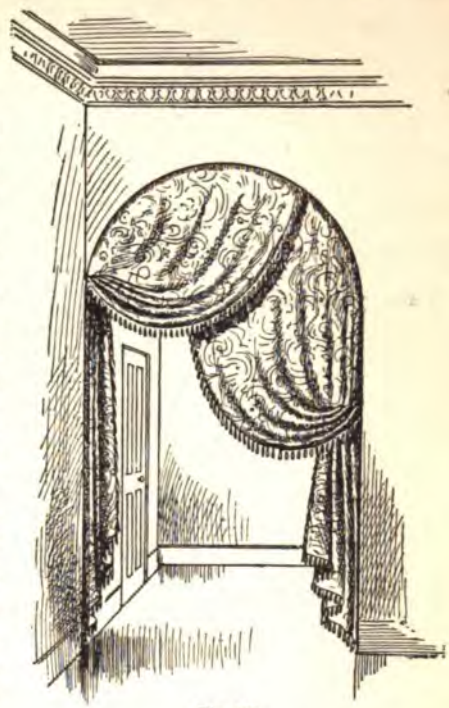


Fig. 139.

Enough has been said to show that there need be no conventionality about our curtains and draperies. The foregoing rules may be applied and adapted to any circumstances. There is no more interesting home employment than the skilful arrangement of beautiful fabrics, nor is there any work for which the dainty fingers and the artistic tastes of ladies are so admirably suited.

BLINDS.

Among the first things to be considered when the furnishing of a house is undertaken are the blinds. They may be broadly classified as those for exterior and those for interior use, the latter being necessary for almost every room.

Outside Blinds.—Outside blinds are, in the climate of the British Isles, only absolutely needful in situations very much exposed to the rays of the sun. As they are also necessarily expensive, their use is restricted to the

better class of houses. The ideal outside blind is one that, while regulating the light and heat, permits of ventilation, and does not obscure the view. Shutter blinds or jalousies serve the purpose excellently, especially if the slats are made so that they can be opened or shut on the Louvre principle. The leaves of the blind shown in fig. 140 are made to work on hinges, but they can also be arranged to slide upon runners if desired, when they offer less hold in exposed situations to high winds. From an æsthetic point of view they go best with architecture of an Italian character. In price they vary from 2*s.* 6*d.* to 5*s.* 6*d.* a square foot, according to construction, quality, and finish.



Fig. 140.—Shutter Blinds or Jalousies.

A less architectural but very effective form of outside blind is that known as the "Helioscene", which gives at once shade and ventilation and a nearly uninterrupted view. As will be seen from fig. 141, it is formed of a series of hoods of striped or other ticking on an iron framework sliding in a wood casing and closing into a boxing, which occupies about 12 inches at the top of the window. It is here shown as fixed within the "reveal" of the window opening, but, like most of the other outside blinds to be described presently, can be placed on the face of the wall should it be desirable to keep the whole space of the window clear. In price these blinds vary from 2*s.* 3*d.* to 3*s.* the square foot.

A somewhat similar but simpler form of blind is the "Spanish" (fig. 142). It has a single hood at the bottom which may be raised or lowered at will. The upper part, which is on a small roller, is concealed when out of use in a boxing of about 8 inches in depth; it is consequently kept clean and protected from the weather. The price, with spring rollers, is from 2*s.* the square foot.

Perhaps, however, the most popular of this class of blind is the "Florentine", which, as shown in fig. 143, forms a complete hood to the window. It generally draws into the room a good current of air when either the top or bottom sash is opened. It also forms a good protection to plants and window-boxes of flowers. These blinds slide on iron bars, and can be fitted to windows which are either curved or plain. The boxing at the top is about 7 inches deep. Prices vary from 1*s.* 8*d.* to 2*s.* the square foot.

When made without side pieces they are known as "Semi-Florentine", and cost rather less. They are also designed for circular-headed windows, when they are called "Oriental" blinds, and cost from 2*s.* 6*d.* to 3*s.* the square foot.

The simplest and cheapest of all outside blinds of this class is a spring-roller blind fixed in a boxing and drawing down to the window-sill. It has, however, the disadvantage of excluding air, unless it is fitted at the

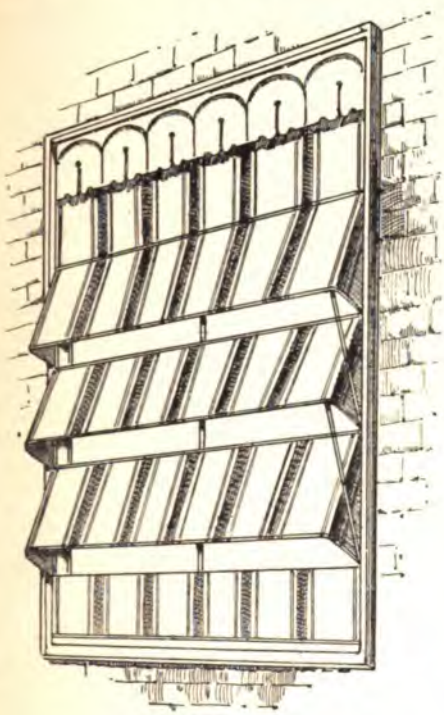


Fig. 141.—"Helioscene" Blind.

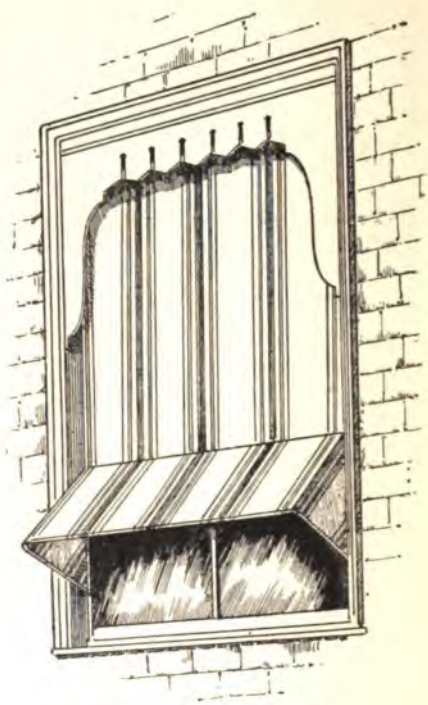


Fig. 142.—"Spanish" Blind.

bottom with extending irons as shown in fig. 144. Without the irons the cost is about 10*d.* the square foot. A modification of this form of blind, having extending iron arms arranged so as not to come into contact with the heads of passers-by and callers, is also often used over doors that are much exposed to the heat of the sun; and the cost of such arrangements may be roughly calculated at about 10*s.* for each foot of the width of the doorway to be screened.

The most desirable material for all these blinds is a striped tick of good quality, blue being more permanent than some of the reds and yellows. Duck is also a good material, and the plain tints of it may be decorated with block-printed designs, or embellished with stencilling in oil colours, or treated by the Willesden waterproofing process, when it acquires an artistic green tint.

The well-known Venetian blind is also sometimes used for outside purposes, but is not very suitable, affording great hold to the wind, while the cords and tapes quickly perish from exposure to sun and damp. If used, they should be of the best quality, and thoroughly well painted. Including boxings, they cost about 1*s.* 6*d.* the square foot.

Inside Blinds.—Indoors, Venetian blinds are convenient, useful, and healthy. Of late years they have rather fallen into discredit, the craze for

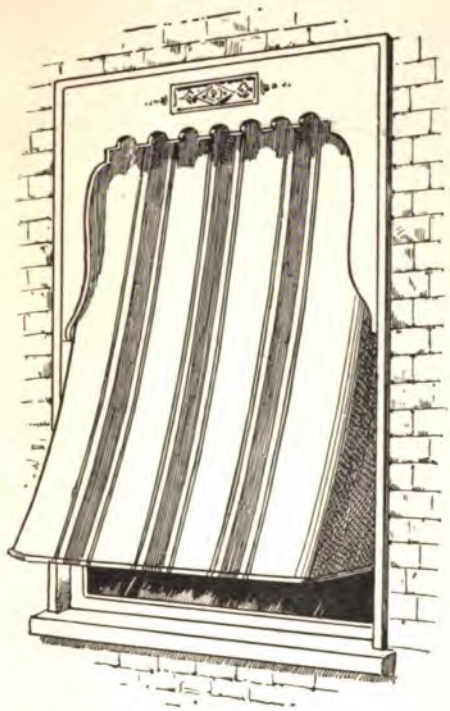


Fig. 143.—"Florentine" Blind.

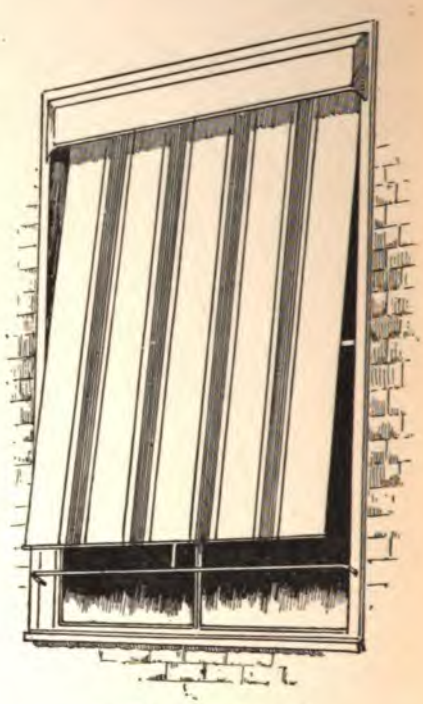


Fig. 144.—Spring Box Blind.

cheapness having led to the manufacture of a wretched article, the slats of common spruce roughly painted, with cotton ladders and jute cords. Really good Venetian blinds, for which nearly 1*s.* a foot must be paid, will last a long time.

A variety, in which the whole of the laths of the window, while still screening the lower portion, can be lowered so as to admit more or less light at the top, can also be obtained at a slight extra cost, as also can patent check actions for facilitating the retention of the ordinary blind at any required height.

In the festoon blind the material is gathered as shown in fig. 145, and is drawn up by cords run through the gathers. The amount of material required is about three times the length of the window. In twill or sateen it costs from 1*s.* to 2*s.*, and in silk from 2*s.* to 6*s.* a square foot. It is applicable to windows of any curvature or plan, where roller or Venetian

blinds cannot be placed, and is most suitable for drawing-rooms and boudoirs.

A somewhat similar but cheaper form of blind is the "Reefer", which, not being gathered, hangs quite flat and straight when down, but draws up into festoons by means of cords running through rows of rings at the back. Though seldom used, it is not so much open to the reproach of being a "dust-trap" as is the festoon blind proper.

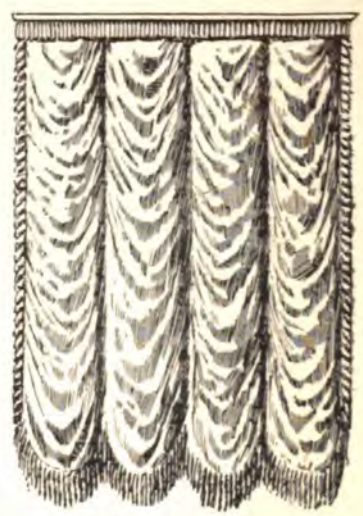


Fig. 145.—Festoon Blind.

The most usual inside blinds are those hung upon rollers, of which there are many kinds, the best known being the plain roller and pulley, the single-line roller, the American spring-roller, and the English spring-roller. The first is, of course, upon the old-fashioned plan — an endless cord passing round the roller-pulley at the top and a rack-pulley at the bottom. The rack-pulley has formed the subject of numberless designs and patents, few of them successful in allowing for the stretching of the endless cord, or preventing its early wear and breakage. This system has consequently been to a great extent superseded by the single-line roller, by means of which the blind is raised by the unrolling of a single cord from off a pulley or rack, on which it again naturally rewinds itself when the blind is pulled down by means of the tasselled cord suspended from the centre of the bottom lath. These rollers, together with brackets for putting them up, cost from 1*s.* 6*d.* upwards, according to size and length.

Of the spring-rollers the cheapest is the American, the blind being raised or lowered solely by the centre line. A slight pull releases the catch and allows the blind to go up or down to the required position, when, if the cord is held steady for a second or two, its progress is at once arrested. Prices are from 1*s.* 6*d.* each, including brackets.

The English spring-roller, when properly made, is the best of all patterns, but the inferior makes of it are to be avoided as they get out of order very easily. The blind is raised by the action of the spring, lowered by pulling the centre cord, and checked at any point by a cord at the side. It is generally supplied fully wound and affixed to a lath, so that it can be easily and readily fixed by any one who can use a screw-driver. Prices are from 5*s.* for a complete set.

Materials for Blinds.—In the materials for blinds there is a very considerable choice, the prices ranging from 3*d.* to 1*s.* a square foot. For about the lowest of these prices a printed material which has the advantage of keeping flat when damped with a sponge for cleaning, may be purchased.

Printed linens vary from 5*d.* to 6*d.*, and hollands, so-called brocades, cost about the same.

In choosing the patterns and colours of blinds, it must always be remembered that they are seen from the outside as well as from the inside. In town houses it is often the custom to have all the blinds of the street frontage to match, but at the back and in country houses more attention may be given to the requirements of each apartment, and less to regularity of external appearance. In the better rooms of most modern houses few of the blinds are now made simply plain and square, most of them being ornamented in some way, by means either of fringe, which may cost from 1*s.* a blind, or of shaped and fringed valances which may be made for 1*s.* 6*d.* each, or of lace insertions and edgings at from 1*s.* a yard. What are known as "Duchesse" blinds have lace panels of varying sizes and patterns inserted at the foot, the cost being from 10*s.* the blind.

Care of Blinds.—Blinds should always be rolled up carefully without creases, and any little defects or damages should be repaired at once, or they may very rapidly become irreparable. When house-cleaning or painting or whitewashing operations are in progress in any room, the blinds should be removed to a place of safety.

DRAUGHTS: THEIR CAUSE AND CURE.

That the average modern house is often exceedingly draughty no one will feel disposed to deny. An open staircase, the absence of vestibule or even of an enclosed porch, close proximity of the front entrance to the doors of the sitting-rooms, bad relative positions of doors and windows, ill-fitting frames of unseasoned timber—all these features are only too common. They cannot as a rule be remedied by the short-lease tenant, who, even if he can afford it, scarcely feels justified in laying out a considerable sum on the structural alteration of someone else's property. Therefore the addition of a porch, perhaps, or the shutting off of the basement staircase by a glazed partition, is all that is likely to be attempted in the way of radical cure, the unlucky householder resigning himself to the chilly, wind-swept condition of his halls and passages, and merely endeavouring to mitigate the discomforts of his living-rooms.

Not a few so-called draughts are not really draughts at all. This sounds paradoxical, but is nevertheless a fact, if the word is taken to mean a current of air entering a room through an aperture, for it is possible to experience the most unpleasant sensation of cold breezes sweeping round one's head in an apartment all but hermetically sealed. The cause is merely the unequal distribution of heat. In many cases the drawing-room is particularly bad in this respect, because the fire is often lighted so late in the day that the walls never get thoroughly warmed; consequently there is a constant loss of heat by radiation from the bodies

of the occupants of the room towards the cold surface of the walls. This produces the feeling of "sitting in a draught". The same sensation is frequently experienced when sitting near a large window, even if it fits closely, for the cold external air, striking on and cooling the glass, causes a chilly current of air to flow towards the warmer parts of the room. This unavoidable discomfort is worse of course in rooms with very large windows near the fireplace.

Then, again, in a long room with a fireplace at one end there is a perpetual rush of air from the unwarmed part towards the stove, especially when the grate is merely thrust into the chimney-opening without being filled in with brick-work at the back. These ancient grates give out little or no heat, and the immense amount of air they draw up the chimney causes a strong, steady, and annoying breeze between door or window and fireplace. This particular sort of draught can generally be modified by replacing the old grate with a modern slow-combustion one, properly bricked in. If it is possible to distribute the heat evenly over the room, the cure will probably be perfect; but this is out of the question in many cases, except by means of an oil-stove placed at the end farthest from the fireplace.

Draughty Floors.—A draught to the feet is often traceable to the open joints of the uncovered boards surrounding the central square of carpet. This is specially the case in flats, where there is generally above the concrete floor, and immediately under the boards, a big hollow space full of ventilators communicating with the outer air.

There are two "sure cures" for a draughty floor: one is to fill the gaping seams with putty or slips of wood; the other to cover the whole of the boards with felt, linoleum, or a closely-woven matting. Neither method is particularly cheap, but both are effective.

Draughty Doors.—In many modern houses of the cheaper class it is possible to see daylight round every door, and probably through a few cracks in the panels as well; therefore it is usually necessary to nail a "draught-excluder" round either the door or the doorway. Besides the old-fashioned list or felt, there are several ready-made devices sold at prices ranging from 2*d.* to 4*d.* per foot. These consist of plain rubber tubing, stout cord covered with cloth or baize, or rubber tubing covered with baize. The uncased rubber is liable to shrink and get hard quickly, but when covered it lasts fairly well; the cased cord is less satisfactory, lacking the elasticity of india-rubber, and wearing out soon. All these paddings may be either nailed to the door itself, or attached to very thin laths fixed round the doorway.

Portières.—A portière within the room will do something towards the desired result, but it is almost useless unless hung on a patent lifting-rod that raises it as the door swings open, this arrangement permitting the curtain to be made sufficiently long to stop the draught under the door. In some rooms a curtain suspended from a gallows bracket of wrought-iron or brass, fixed to the wall near the top of the door and projecting into the

room (fig. 146), is as effectual as the portière actually attached to the door, and it certainly looks well if it is made of handsome material.

If the house is very cold, the portière within the room should be supplemented by a pair of curtains without. They ought to run on a rod, fixed to the architrave of the door and sufficiently long to allow of their being pulled well back on either side of the opening when necessary.

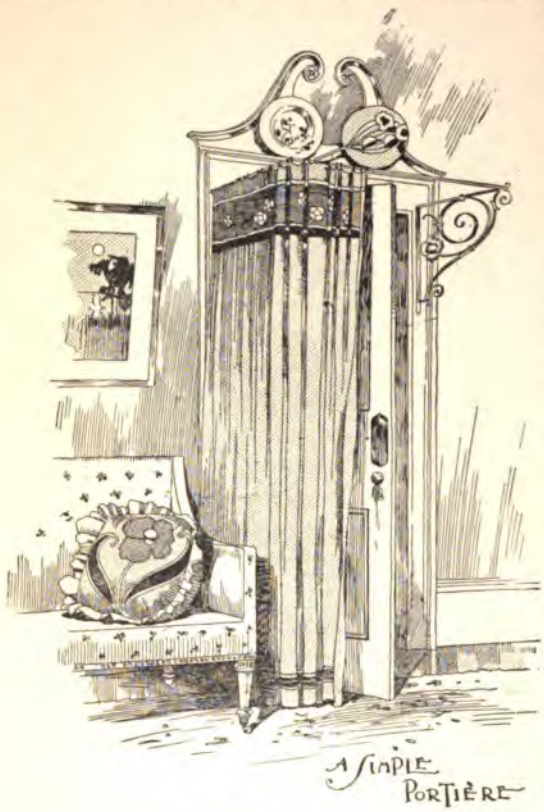


Fig. 146.

Screens.—The value of screens where the draughts are very bad has been perhaps exaggerated, yet they are undoubtedly useful to shelter small portions of the room, and they certainly help to produce an impression of comfort. Of the various kinds of screens the Japanese are, of course, the best known and the cheapest, but their artistic quality has been steadily deteriorating during the past ten or twelve years, and now only among expensive specimens, which cost from £3, 3*s.* up to £20, is it possible to find one that is really suitable for use in a tastefully furnished house. The hundreds of screens sold at prices between 10*s.* and 25*s.* are, with very few exceptions, bad in design, colour, and construction.

Screens covered with good leather-paper are handsome if the paper is bold in pattern and richly coloured, but they are usually too heavy to be moved easily, and are therefore not suited for all situations. Antique Spanish leather or tapestry screens are luxuries for the few, but it is occasionally possible to pick up old pieces of brocade which, when cleverly mounted, make charming screens for drawing-rooms and boudoirs. Of course it is not often practicable to obtain sufficient old brocade to cover the whole of a threefold or fourfold screen standing perhaps nearly six feet high; but it is not necessary that the two sides of the screen should be alike, and, moreover, the lower half of each panel may be of velvet or Liberty velveteen, in a carefully-chosen and harmonious tone of colour. The frame of such a screen may be of mahogany, or it can be white enamelled, gilded, or covered with gold leather-paper, the brocade and velveteen being in any case

fastened on with very small gilt-headed nails closely set. If the screen has an appointed place from which it is seldom moved, it is rather a good idea to cover the upper half (either entirely or merely an oval in the centre) with velvet, on which any tiny prints and silhouettes in quaint old-fashioned frames can be hung. Miniatures are, as a rule, rather too heavy as well as too valuable for such a position, otherwise they might be shown to advantage here.

A simpler type of home-made screen can be made of arras-cloth,—it costs about 9*d.* a yard in plain colours,—stretched smoothly and tightly on a green- or brown-stained wooden frame and fastened with rather large copper-headed nails. The arras can be ornamented with embroidery or painting, or with a combination of both, the pattern being first painted and then outlined with stitches in thick flax. A common laundry clothes-horse makes a fairly good foundation for a large screen, but it ought to have an additional bar at the bottom of each panel, and the webbing hinges should be replaced by iron or brass ones.

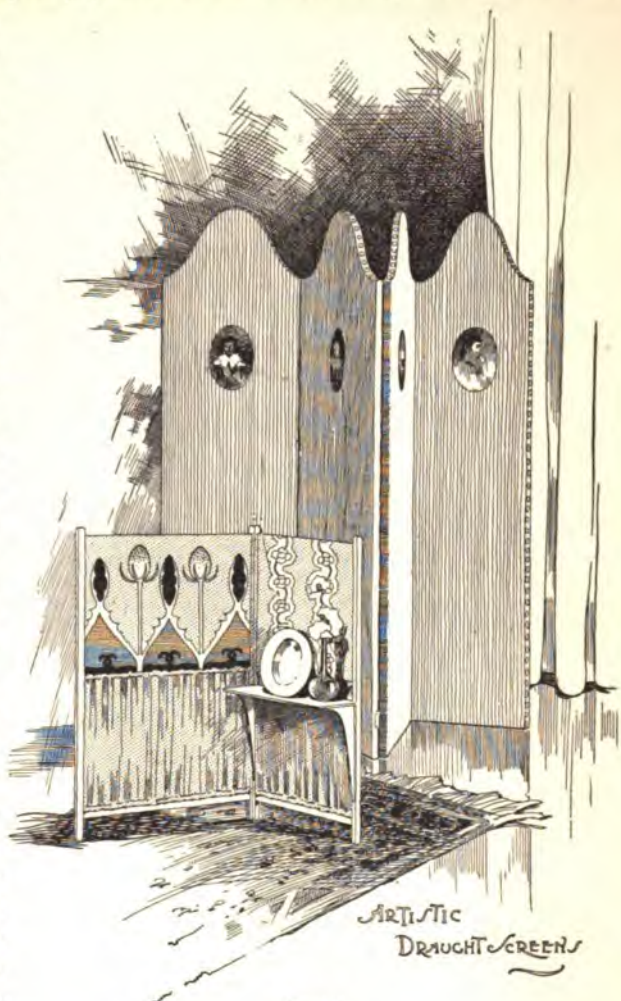


Fig. 147.

Scrap-screens of Christmas-cards and cuttings from illustrated papers are no longer fashionable. But a scrap-screen that has some artistic merit can be made by mounting on a background of sage-green, brown, or smoke-gray cartridge-paper, the charming etchings, photogravures, prints, and lithographs issued as supplements by some of the artistic periodicals. The lower half of each panel of the screen might be covered with Japanese leather-paper, and the frame either enamelled a shade deeper than the tone

of the cartridge-paper, or stained oak, and ornamented with a slight but good poker-work design. A quaint screen could be made by using the small steel engravings to be found in those old "Keepsakes" and "Annuaires" that are relics of the early days of the Queen's reign, the little pictures being mounted on dull blue, buff, or greenish-gray paper, and larger engravings—oval portraits for choice—introduced here and there. A narrow band of gold paper can be carried round each panel as a finish, and the frame may be enamelled white, mahogany-stained, or gilded, while, if scraps are scarce, flock-paper, painted over, can be used to cover the lower part of the screen.

HOME UPHOLSTERY.

During the past few years it has become a common practice to perform a considerable amount of upholstery at home. The reason is, no doubt, to be found in the frequent disputes between capital and labour, the publication of technical information on the subject, and the intelligent interest that is taken in all matters connected with the furnishing and decoration of the house. This interest is likely to become more extended, because the services of professional upholsterers are now so expensive that no one of an economical turn of mind cares to engage them. Moreover, in many districts they are not easily obtained.

Slips for Curtains and Furniture.—There are two kinds of slips in pretty general use, one a dust-cover usually made loosely of brown holland, so that it may be put on and taken off easily, and the other a more finished article of chintz, cretonne, or other decorative material. The descriptions given of the methods of cutting sofa and chair-covers apply equally to both kinds, except that the former should be made quite plainly and much easier in fit than the latter.

Where there are nice curtains and draperies, it is a good plan to make holland bags for them, to be used when the house is dismantled or cleaned. In the case of large cities, where smoke and fog prevail during the greater part of winter, if these bags are made of cretonne they may be used during this period as if they were the regular curtains. This is better than taking the curtains down, for if put away they are liable to be crushed unless very carefully folded, and there is always the danger of moth. When the bags are for dust-covers, they should take the shape of the curtains when drawn back, and should be left open at the top, with a space of about 6 inches at each side for passing over rods, and two rows of tapes for tying. If the bags are in cretonne and intended to be used as curtains, they must be ample enough to admit of draping.

A dust-bag, when made for a valance, should follow its outline. It is

fixed by means of rings and hooks to the lath or architrave of the window underneath, and goes right over the cornice or pole at the top.

In large towns, where the tendency is to take long holidays and have the house dismantled for months each year, all the furniture should be provided with dust-slips. The initial outlay will be saved in the preservation of the various articles.

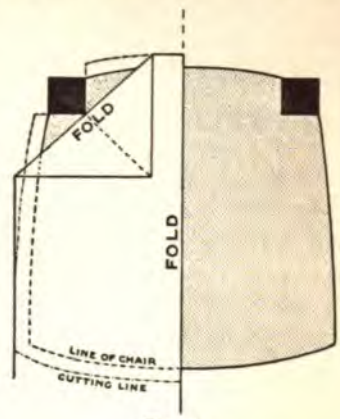
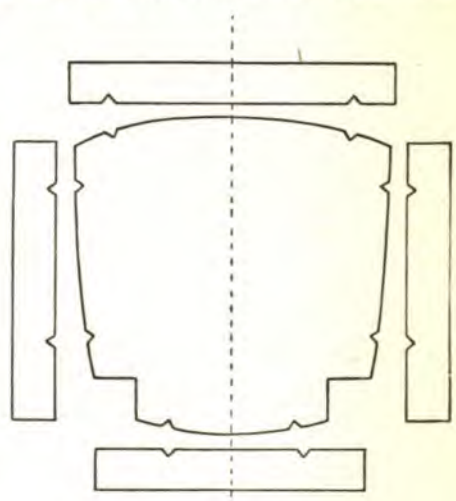


Fig. 148.

A Slip for a Small Chair.—Chintz, cretonne, and the lighter makes of French tapestry are suitable for drawing-room and bedroom covers, while for dining-rooms an appropriate shade of linen is more serviceable.

When making slips in a material with a pattern, care must be taken to centre the design on each piece of furniture. At the same time, the material should be cut without waste. To accomplish these two objects, first, take off a length for a sofa back; then, if the pieces to join it cannot be cut without waste, try the seat, the arm, the outside, the border, or a small chair, until all the various pieces are cut and matched with the minimum of waste. Then find the centre of the seat of the chair, and place pins at back and front to mark the middle line. Fold the cretonne in two, creasing it firmly from back to front. Place it over one half of the chair—say the left half, as it is the easier to cut—with the fold exactly corresponding with the middle line. Fasten it in position with pins, keeping them sufficiently clear of the edge to admit of cutting. Fold the cover at the back corner, and cut it close up to the back leg, as indicated by the dotted lines in fig. 148. With a piece of chalk mark all round the edge and cut off the surplus, leaving about ½ inch for a seam. Around the back leg a hem must be made along the line of wood. It must not be forgotten that cretonne, when washed, shrinks lengthways, but stretches in the direction of its width. In the case of a sofa or a large easy-chair, the change in shape becomes very pronounced. In consequence, covers should be cut tightly in width, but with a little to spare in the length.


Fig. 149.

Cut the borders 5 or 6 inches deep (if the cover is to be finished without

a frill), fold the front and back borders in two, pin them so that the fold corresponds with the fold of the seat, pin one side border on, cut away all but a ½-inch seam at the back and front corners, and, with the exception of notching, which is performed by holding top and border together and cutting out small v-shaped pieces at the front, back, and side seams, the cover is finished in cutting. The notching is important, because from the first cover all the others are cut, and the little notches assist in placing together the various parts without any difficulty. This is especially true of

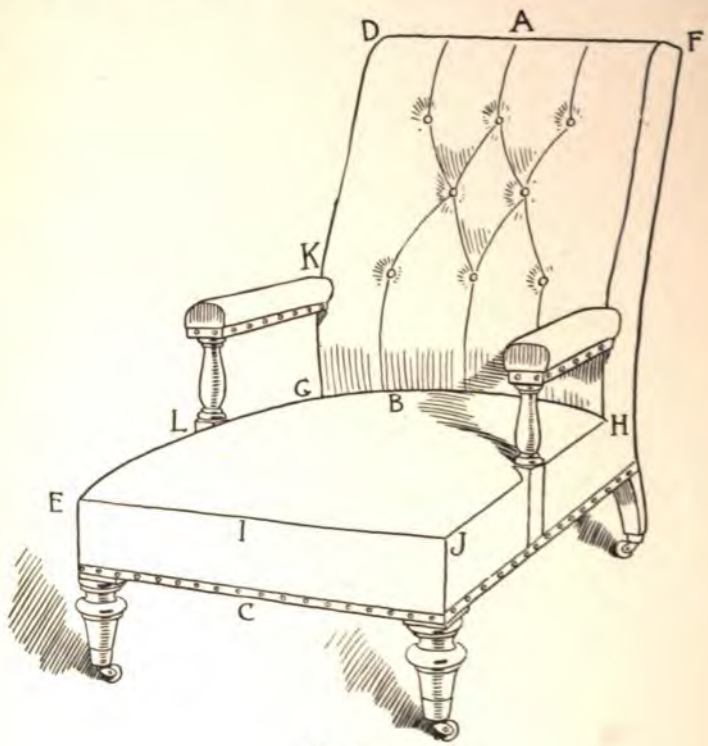


Fig. 150.

the larger pieces of furniture. The first cover when finished and laid out flat will be exactly like fig. 149.

The side borders must, of course, be made right and left. This is done by placing the two right sides of the material together when cutting the one from the other.

There are various ways of finishing the bottom of a cover, such as hemming, binding, and frilling. If the last way is adopted, the plain borders should reach to the bottom of the rail, beyond which a 4-inch frill, with about ¾ extra for fulness, should hang. The top edge may be finished either with a welt (that is, a small cord covered with the cretonne and inserted when seaming) or with a plain seam. When the different parts are placed together, all the edge seams should be overcast and then

machined. The overcasting prevents fraying out when the covers are cleaned. On the back borders an extra piece called a fly, with a couple of buttons attached to it, should be joined at each end. At the corresponding end of the side borders should be a double piece with two buttonholes. When the cover is put on the buttons are out of sight. If likely to require frequent washing, it might be buttoned at the front corners as well, as by this means it may be ironed quite flatly.

When slips are made for small chairs covered with morocco, or with any other hard, smooth material, tapes should be attached for tying underneath to each leg. Sofa and easy-chair slips should also be cut on the half principle, the other half being finished on the table. As couches are not alike at the ends, covers must be cut on them throughout.

An Easy-chair Slip.—Small chairs are all pretty much alike in shape of seat, but the larger articles of furniture differ so widely that it is impossible to give an example that will include every one. Fig. 150, however, will illustrate the way in which an easy-chair should be treated.

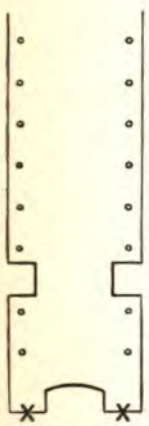


Fig. 151.

Avoid seams as much as possible. It is absurd in a loose cover to divide the material, and then proceed to sew it together again. Seams, however, can only be dispensed with altogether when the lines of furniture are straight. In fig. 150 measure from A (the centre point of D F) to B (the centre point of G H), then to C (the centre point of E J), and add 12 inches to the sum of the two. Fold and pin the covering on as before described, placing the top at A, and leaving a seam over the bottom at C. The additional 12 inches should be left loosely at B for tucking in, to keep the cover in position when finished. To get rid of the fulness which will show at D and E, a piece should be cut out, only a seam being left, which must be run inwards to a point.

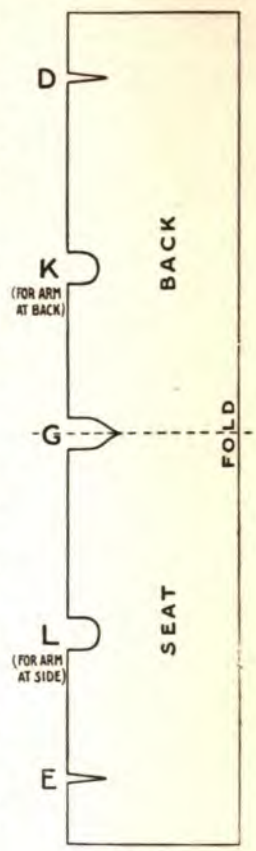


Fig. 152.

At the juncture of the arms with the back and the seat the cover must be fitted round, and a side border added to the back and seat. The arm may either be joined to the back, or, as is much easier, may be made separately. It can be cut from one piece, taken underneath and laced, and fitted at the front as shown in fig. 151. This brings the seam in front at the two Xs, which are joined together. Another way and a better, if more difficult, is to take this small seam round to the outside.

When all the various parts have been notched, a piece is cut out

between the back and seat, as at G in fig. 152. The cover is carefully fitted for hemming at F and H, and when the side borders of the seat and the back have been cut through at the arm support (at which points buttons will be required), the pins may be removed and the duplicate parts cut. When spread out, the two parts will appear as in figs. 151 and 152.

In all cases where the back of a chair is wider at the top than at the bottom, the outside back must be slit up and made to button. When additional material can be tucked away between the back and the seat, and between the arm and the back in some cases, it will keep the cover the better in position.

A Sofa Slip.—The directions for easy-chairs are also applicable to sofas. But in the case of a sofa with a large projection over the top towards the back, the outside back should be cut tightly, otherwise it will hang out from the frame. It must also be buttoned all the way from bottom to top at one corner of the outside back. When the cover is put on, it should be fixed at the closed end first. There is another point to remember in reference to a large sofa. The top of the outside back should be hollowed out towards the centre to the extent of 1 inch, the tendency being for the cover to drop here. If a frill is used, a little more may be hollowed out to counteract the extra weight. When covers are being put on, first place all the seams at the edges, and then tuck away all the extra material.

To Make Cushions.—As cushions are often made at home, a few hints on the subject may prove useful. The best inside cover for a hair cushion—and all large cushions should have inside covers—is scrim or calico. If scrim is used, a stiffer border, such as canvas or tick, is advisable. These inside covers should always be cut about $\frac{3}{4}$ inch per foot larger each way than the finished size, with seams extra. The hair must be inserted firmly and regularly, and the cushion stitched through like the back of the chair shown in fig. 150, as well as all round. An upholsterer's needle and thin twine are required for this work, which is performed as follows:—

Knot the end of the twine and pass the needle through the border about 1 inch above the centre, pushing up the hair and bringing the needle out on the top, about 4 inches from the front. Then pass the needle back through the same hole in the top without catching the scrim, bringing it out on the same line of border, 2 inches to the right. Take a small catch of the border and repeat this all the way round, holding the two ends of the twine and pulling the hair firmly into the edge. Turn the cushion upside down and repeat the operation, which will be better understood after a careful examination of the edge of a mattress (fig. 153).

Should a very firm edge be required, another row at the top and the bottom will be necessary. It should have a catch on the top as well as on the border of about 1 inch each way, with the hair pushed in both upwards and downwards.

A thin coating of hair, called second stuffing, should then be fixed on the top of the cushion. This is done by making long stitches of twine all round, about 3 inches from the edge, with one or two rows between, and

passing the hair underneath them in small handfuls at a time, teasing it all out until it becomes level. If this coating is not covered with calico stitched to the edge, wadding should be placed between the hair and the covering. When the latter has been drawn on and securely stitched at the bottom, it may either be tufted or left plain, as desired. If plain, it must be stuffed flatter and firmer than if tufted. In nearly all back cushions the edge stitching may be dispensed with. The centre stitching is necessary to prevent the hair from falling to the bottom.

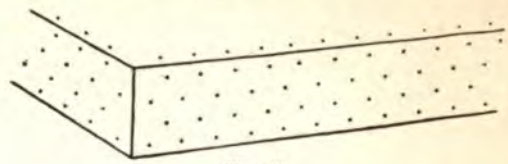


Fig. 153.

To remake a hair mattress, the process is the same as that just described. Of course the hair should first be well beaten and teased. A mattress, however, is large, dusty, and troublesome, and had better be left to the upholsterer.

To Make Down Cushions.—The making of down cushions is daintier and simpler work. The front may be of any fancy material, brocade, tapestry, or fancy work on satin, plush, or any of the pretty shades of linen. The danger to avoid is puckering the material: many otherwise pretty cushions are spoilt by this defect, which may easily be remedied in the following manner:—

Draw a square in pencil on a clean sheet of paper spread out on a table. It should be about 1 inch each way larger than the cloth on which the fancy work has been done. Tack the work (face downwards) to these lines, stretching out all the puckerings, and with a cloth or brush sprinkle a solution of flour and water about the consistency of starch over all the sewn part. Pass a hot iron lightly over it until it becomes almost dry, scraping the baked flour from the iron from time to time. Leave the work in this condition for an hour, remove the tacking, and all the puckering will be gone, and the work very much improved.

If a frill is to be used a "Liberty" or a pongee silk will do equally well. This should be cut from 9 to 12 inches deep, according to the size of the cushion, with double fulness. It should be folded double and ironed along the fold, and it should have twice as much fulness round each corner as at the other parts to enable the frill to make a square corner. The back may be of the same material as the frill, and, if thin, should be lined with a sateen of nearly its own shade. The inside down cushion should be 1 inch each way larger than the covering; this makes it fill out better than if the two are of exactly the same size.

This description applies to all fancy cushions, whether intended for chair-backs or for other purposes.

To Re-upholster Furniture.—For re-upholstering worn furniture it is advisable to keep a stock of different sizes of tacks, a few pounds of hair at about 1s. per lb., a little wadding, an upholsterer's hammer, a small wooden mallet, and a screw-driver, or, what is better, a ripping chisel, which may be bought from any tool merchant. The first thing to decide is whether to

remove the old cover or to put the new one on top of it, sprinkling a little hair and wadding over it to fill up existing hollows. Should removal be decided upon, use the chisel carefully to knock out the tacks. Afterwards tease up the hair, add a little more, and cover it all over with calico, pulling it regularly and tightly, yet leaving a little of the straining to be done by the covering.

It is better to do without buttons. A plain cover is the best and simplest. Only the smallest tacks should be used, as they are less liable to damage the wood, and are more easily hammered in than larger ones. When putting on either calico or covering, always centre the back and front. Temporarily fix a few tacks at the back, strain gently towards the front, and do the same at the sides. When the cover is in position it can be gradually tightened all round. The corners and all upright obstructions should be cut in the way illustrated in fig. 148.

Before any cover is taken off it should be examined carefully in order to ascertain how it was originally put on. The amateur upholsterer should never neglect this useful precaution. He may not, and probably will not, be conspicuously successful in his first attempt, but a little practice will render the work easy.

FINAL DECORATION.

PICTURES.

Selection.—In no department of the furnishing of the home is there greater scope for the exercise of taste than in the selection of pictures. Most people, being only tenants and not owners of their houses, have to make the best of whatever permanent embellishments the buildings may contain, but in the matter of pictures there is free choice for all, and the man of taste, even if his purse is not a long one, may surround himself with work of undoubted excellence, which will give pleasure to himself and his friends. In these days of artistic education it is perhaps unnecessary to say much as to how "not to do it"; it will suffice to condemn in passing bad German lithographs, gaudy chromos, wool-work pictures, and coloured photographs. Blank walls are better than such things, and a good wall-paper is better to look upon than a bad picture.

As regards what should be selected, it may be first noted that no picture should be hung without a reason, such as its artistic merit, or some particular association of pleasure or interest attaching to it. Under the latter head, of course, come family portraits and photographs and views of places, not particularly artistic, but still having their legitimate place in the home. It is only with regard to those works which are to be selected by reason of their merits that general advice can be given, and for convenience they will be considered under the two divisions of originals and copies or reproductions.

Original Works.—The most valuable of artistic possessions are, of course, originals; but it must be remembered that a good reproduction is better than a bad original, and that by modern processes we are placed in possession, at a very moderate cost, of the most faithful transcripts of the greatest art of all ages and countries. Originals are principally to be found in the form of oil paintings and water-colour drawings, pastels, and monochromes, the last including pen-and-ink, charcoal, chalk, and pencil sketches, and also etchings. In the department of oil paintings there are the old and modern masters, but about the former it is only necessary here to say that the price of good specimens places them quite out of the reach of the ordinary householder, while the bad ones are dear at any price, and, together with the many forgeries and fabrications that abound, are only fit for the mock auction and the shops of the fifth-rate dealer, in respect of both of which the inexperienced picture-buyer may be warned. Unless

the subject or execution gives him some particular pleasure, he had better not waste his money on anything purporting to be an "old master". The very best of modern pictures also command such high prices that few men can own a Leighton or a Millais, but there is every year produced an immense quantity of sound artistic work which may be purchased from the exhibitions or from the artists themselves at prices ranging from £10 to £100.

The national art of water-colour is, roughly speaking, a hundred and fifty years old. Good examples of the earlier masters are, of course, expensive, but there is an abundance of good modern art to be obtained at prices varying from £1 to £50. It is generally cheaper to buy direct from the artist than from exhibitions or dealers, as the intermediate profits are thus saved.

In these days of copious illustration of all kinds of publications there are also innumerable monochromatic and other drawings, which, when they have served their purpose, may be purchased very cheaply from artists and publishers. At annual exhibitions work of this kind done by good artists for periodical publications is disposed of at prices varying from a few shillings to a few pounds.

Copies and Reproductions.—Next in value to good originals are good copies or reproductions of them. The first of these are very rare, as really clever artists naturally prefer to do original work of their own, while second-rate copies are generally a mere caricature. Many brilliant men have, however, devoted themselves to the reproduction, by the various processes of engraving, of the pictures of great artists, and the steel and copperplate engravings, line work, mezzotints, and etchings produced by them form beautiful and not expensive decorations for the home. Owing to the fragility of paper and to other causes, fine plates more than a hundred years old are rare and costly, but the ordinary individual may possess some very fair specimens if he is not particular about width of margins and other matters which appeal principally to the connoisseur. Though the great school of line engravers of the earlier part of the century has been almost, if not entirely, killed by the much more rapid and cheaper methods of modern photographic reproduction, many fine examples still exist, and, being temporarily out of fashion, can be bought very cheaply. Indeed, it is probable that a well-chosen collection made now would prove a profitable investment when in the efflux of time the pendulum of fashion again swings back to a just appreciation of the art.

In this connection must be mentioned the Art Union of London, which for a long series of years did much by the issue of fine plates to keep the art of steel engraving alive, and still, although it has naturally fallen into line with more modern processes, continues to provide good art for the home. The annual subscription is one guinea, for which the subscriber receives a copy of the engraving of the year and a chance in the distribution of prizes, which consist of objects of art of very considerable value. The address of the society is 44, Strand, and it has agents in most of the large towns.

At present the most popular forms of hand-engraving are mezzotint and etching. In both, many reproductions of old and modern masters are published by the leading firms. The prices of good engravings range from one to ten guineas.

In the various photo-mechanical processes, such as photogravure, heliogravure, goupilogravure, the photographic camera is substituted for the hand, and the action of light and of acids is used to produce an image on the metal plate. These processes have the advantage of giving an exact rendering of the handling and brush-work of the original artist, but also the disadvantage that photography does not always translate correctly into black-and-white the colour-values of the original pictures. Hence opinion on the artistic merits of these reproductions differs. On the whole, however, they produce good renderings, and at prices less than those of hand engravings, varying from five shillings to as many pounds.

In the same category must be placed photographic reproductions in which prints are made direct from the original negatives. The carbon-process gives monochromatic prints in a variety of tints, black, red, chalk, sepia, blue, green, and purple, and the platinotype in a very fine and soft black.

Framing.—The functions of a frame are to protect a picture and to cut it off from its surroundings so that it may be contemplated without distraction of the eye. The choice must therefore be affected by the medium, the character of the subject, and the position it is to occupy. Oil paintings and large water-colour drawings are generally best framed close (*i.e.* without margin) in gold frames, while small water-colours also look well in gold, but generally need a gold mount to protect them from immediate contact with the patterns of the wall-paper. For engravings, etchings, photogravures, and black-and-white work generally, black or brown frames are usually best, the latter being of rose-wood, oak, or walnut, or other woods stained to the required tint. For black prints, black or dark-green frames look well, and in all cases the frames should be wide enough to support the dark parts of the picture; the darker the work the darker should be the frame. Engravings are usually framed with the whole of their margins visible, except in cases where the latter are old and defective, when they may be covered with glass enamelled in black and gold lines, a treatment very suitable for stipple engravings in the "Bartolozzi" style. For them, and for antique engravings generally, there are now made several special reproductions of old mouldings.

Direct photographic reproductions in carbon, autotype, or platinotype, if large, should be framed without margins; if small, they are best placed upon or under mounts of brown or gray tint, chosen to harmonize with the colour of the prints, and sufficiently dark not to compete with the high lights of the subject. White mounts are liable to kill any photograph in this respect.

The frame should, also, be suitable to the subject of the picture, but at the same time never obtrusively so, its function being merely to complete

and not compete with the picture. Fairly plain frames are generally best, and whatever ornament they contain must be simple as well as appropriate. The mouldings, for instance, for a frame for an architectural subject should be architectural in character, and Gothic or classic in form according to the style of the subject. The very beautiful frames of this kind, designed by Leighton and Poynter for their classic pictures, are cases in point, and will be remembered by Academy visitors. Oil paintings generally require heavier frames than water-colours, and portraits and dark interiors will bear wider mouldings than light and delicate landscapes. For some subjects of fruit and flowers, carved Florentine frames are very suitable, and for shipping subjects a rope pattern often forms a not inappropriate portion of the moulding.

There remains to be considered the question of position. In rooms and interiors of a decidedly architectural character the frames may well be made to correspond with and form part of the general scheme, harmonizing with its style and period. The best background for pictures is a plain paper, or one of very small pattern, preferably geometrical; large or naturalistic patterns are destructive of pictorial effect.

Another important point is that all pictures should be glazed. In the case of oil paintings the use of glass is sometimes objected to as causing reflections, but this is only a serious inconvenience in large galleries lighted entirely from the top, and the benefits of preserving the picture from dust, dirt, and injury far outweigh the objections even there. The glass should also be glued into the frame, and the whole covered and made air-tight at the back, care, of course, being taken that glass, canvas, and mount are all perfectly dry before the back is finally made up. The surface of the picture should not be in contact with the glass. To prevent this, the slip may be put beneath the glass in close-framed pictures; cut-out or sunk mounts afford the necessary protection. In all cases the glass should be flat, colourless, and free from bubbles and defects.

Distribution.—In arranging the distribution of pictures in the various parts of the house, it is usually best to keep each kind of work as much as possible together, and apart from others that differ from it. If oils, water-colours, and monochromes are placed indiscriminately together, the oils will probably look too coarse, solid, and heavy in comparison with the delicate water-colours, which in their turn will appear pale and feeble by the side of the more solid oils, while, in the presence of either, engravings and monochromes may seem cold and ineffective on account of the absence of colour.

This rule of separation cannot always be rigidly followed in small houses, but in the main arrangement oil paintings may be appropriately placed in the dining-room and hall, water-colours in the drawing-room, engravings on the staircase, and photographs in the bedrooms. In larger houses the subject may also affect the distribution, game, fruit, and other still-life pieces being hung in the dining-room, where also important landscapes and figures are not out of place; family portraits in the hall;

light landscapes, flower-pieces, and bright-costume subjects in the drawing-room; historical subjects and portraits of favourite heroes and worthies in the library; sporting and similar subjects in the billiard-room; topographical views on the staircases and landings, and miscellaneous prints, harmoniously grouped, in the bedrooms.

Large pictures should, of course, be generally kept for large apartments. It may be noted that dark subjects and large figures have a tendency to lessen the apparent size of the room in which they are hung, while open landscapes and perspective interiors have the opposite effect.

Picture-hanging.—Several important points arise in connection with picture-hanging. Very large pictures, or those intended to retain their positions permanently, are best fixed with "looking-glass plates" in the same manner as mirrors, but smaller ones have rings attached to their backs, and are hung with cord or wire from nails, rods, or rails. Cord is most usually employed, but is neither as strong nor as durable as picture-wire, one of the best varieties of which is shown in figs. 154 and 155. It is usually best to use two vertical lines for hanging pictures rather than one line in the form of a triangle, especially where a large number have to be placed.



Fig. 154. — Two-strand Picture-wire (breaking strain, 80 lbs.), with patent adjusting fastener for ring.

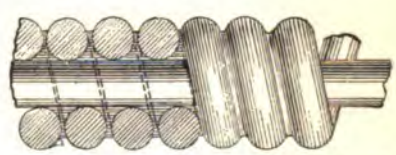


Fig. 155.—Enlarged Section of Picture-wire, which consists of a core of steel wire, covered with waterproofed cotton, bound round with Ormolu wire.



Fig. 156.—Brass Wall Hook, for picture hanging.

The cords or wires may be attached to the wall by means of nails, plaster-hooks, rods, or rails. Nails are most commonly employed, but are destructive to paper and plaster, and very inconvenient in view of that re-arrangement which a growing collection requires. Plaster-hooks (see fig. 156) do less damage to the walls, each being fixed with only three small pins. They will carry considerable weights, and when there are but few pictures, may be placed behind them out of sight. Best of all, however, are rods or rails, the former permanently fastened to the wall beneath the cornice, and the latter often in modern houses placed at the lower edge of a decorative frieze. Both carry sliding-hooks which admit of easy and accurate adjustment.

The positions to be occupied have next to be considered. If there are many pictures, it is best to begin with a line round the room at about four or five feet from the ground, to which the bases of the lower row of frames

may be adjusted. In this line should be placed architectural subjects having strongly-marked perspective, also landscapes with low horizons, interiors, and all works of fine finish that demand close inspection. Above the "line", as it is called, may be placed large figure-subjects, landscapes having high horizons or being of the nature of bird's-eye views, and work generally of broad execution that does not require nearness of view. This method will also, to a certain extent, tend to keep apart work of fine finish and that of bold execution, so that neither will damage the effect of the other.

All pictures must be carefully hung exactly upright. Nothing is more unsightly than the tilting forward sometimes seen. It is only occasionally necessary to prevent reflections in the upper row of pictures in large top-lighted galleries.

The lighting of the pictures in ordinary dwelling-houses cannot, of course, be arranged with ideal perfection, but, generally speaking, dark or indistinct works should be placed in a good light and brilliant ones in the darker portion of the room. As far as possible, the incidence of light on the picture should coincide with the lighting of the subject. For example, a portrait should not have the shadow side of the face turned towards the light. Most pictures also look best in a similar light (as regards direction) to that in which they were painted, as a little practical experiment will easily show. Positions that receive direct daylight should generally be avoided, or fugitive pigments may be quickly affected or altered.

Care of Pictures.—The last remark leads naturally to the consideration of the best means of preserving pictures. Their chief enemies are dirt, dust, damp, smoke, gas-fumes, and too strong light. Directions have been already given in respect of some of these, but a few other hints may prove useful. Frames should be frequently dusted with a soft brush, and, when necessary, cleaned. If gilded, they should be lightly washed with pure spirits of wine applied with a tuft of cotton-wool and left to dry. When dirt has to be removed from the actual surface of an oil-painting, it may be sponged off with water to which a little ox-gall has been added, and afterwards with pure water, the moisture being carefully removed with a soft silk handkerchief. In no case, however, should water be freely applied to the surface of a cracked painting, or portions of it may scale off. Water-colour drawings and engravings soiled with dust and dirt may be cleaned by the light and careful application of bread-crumbs, not stale enough to produce scratches and not new enough to be sticky and smeary. Any more complete treatment or restoration required by a valuable picture than could be effected by the methods above indicated should only be undertaken by a professional expert in such matters; if attempted by another, it may easily result in irremediable damage.



Fig. 157.—Good and Bad Methods of Picture-hanging. 1, The "Triangular" method; 2, the "Tilted" method (both to be avoided); 3, Pictures hung by perpendicular cords; 4, Pictures hung from frieze moulding.

BRIC-À-BRAC.

Under the head of bric-à-brac are generally included all ornamental pottery and porcelain, fancy glass for use and beauty, the many trifles imported of late years from the East, and those made in imitation of them. In a broad sense, the term stands for anything precious and breakable.

China.—The taste for fine china began in France under the "Grand Monarque", and crossed over to England in the days of the Stuarts. Queen Henrietta Maria showed some liking for it, and her son Charles II. still more, which was encouraged by the French proclivities of his youngest sister, the Duchesse d'Orléans, and of his Portuguese wife, Catherine of Braganza. Under Queen Anne, society affected more fondness for china and porcelain than was justified by its knowledge of them, but the Hanoverian sovereigns were the first to foster their production in England. Pottery is coarse, strong, and fit for everyday wear and tear, and the knowledge of how to make it seems to date back to a very remote period, if we may judge by relics that have survived to us, and by allusions in old records. Porcelain or china is fine and translucent, and certainly came originally from China, where the conservative Celestials jealously guarded the secret of making it. The word porcelain is probably from the Portuguese *porcelana*, meaning "little pig", for Portuguese traders with the East used the small shells called cowries as currency, and as there is a certain resemblance between the shape of a cowrie and a small fat pig, and the first specimens of china brought over had a shell-like finish, the word porcelain was applied to them and gradually took root in the vocabulary of nations. Towards the end of the sixteenth century "a porringer of white porcelyn and a cup of green porcelyn" were presented as New-year's gifts to Queen Elizabeth, so that they must have been accounted both rare and valuable; and remembering how many thousands of miles they must have travelled on camel-back across the deserts, as mariners had not then learned to double the Cape of Good Hope, one may wonder that they ever reached this country whole and unbroken.

There is very little doubt that the true secret of porcelain-making was obtained by Père d'Entrecolles, the Superior of the French Jesuits in China, from the converts in the province of Feouliang, and sent home by him with full instructions and specimens to Père Orry in Paris in 1712; and this valuable information resulted in the setting up of the famous manufactory at Sèvres.

Chelsea.—The earliest establishment for making china in England must have been at Chelsea, where a glass factory had existed for centuries. Pounded glass was much used in the first china-producing experiments, and there was plenty of it at hand. In 1684 a certain John Dwight claimed to have discovered "the mystery of making transparent porcelain" at his manufactory at Fulham, and this seems to have been the real beginning of the Chelsea china works. George II., being a true German at heart,



POTTERY AND PORCELAIN

1, Persian. 2, Derby. 3, Worcester. 4, Wedgewood. 5, Bow. 6, Plymouth. 7, Chelsea. 8, Sèvres. 9, Chelsea.



followed the fashion of other German princes in encouraging the development of porcelain-making, and under his patronage Chelsea attained its fullest success and prosperity. The manager, a foreigner named Nicholas Sprimont, held the reins for about twenty years from 1750, and under him all the finest pieces were turned out. The only reliable marks (fig. 158)

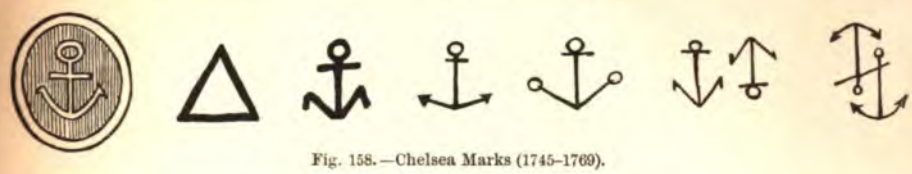


Fig. 158.—Chelsea Marks (1745–1769).

are triangles and anchors, but here and there the date may be met with. The triangle is supposed to have been originally the mark of the tripod on which the piece was baked or fired, but, as the early potters were not perhaps always able to write their names, they made their marks after the manner of the unlearned.

Bow.—Bow china is valuable and now rare. The factory seems to have been established in 1730, but not much is known about it until 1744. On account of its capacity for imitating oriental china it was called "New Canton", and these words always mark the article bearing them as a very

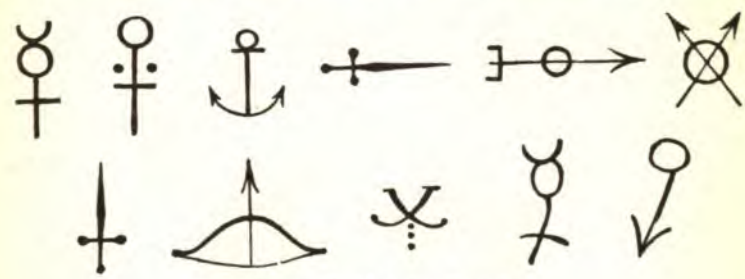


Fig. 159.—Bow Marks (1730–1775).

early specimen. The principal marks (fig. 159) are anchors and arrows, and now and then a bow and arrow. The factory was broken up and the movables sent to the works at Derby in 1775.

Derby.—The Derby porcelain factory dates from 1751, and its founders were William Duesbery, an enameller, John Heath, who most likely provided the sinews of war, and Andrew Planché, a man of French parentage who had lived and worked in Saxony and knew all about the ingredients and mixing. In 1770 Duesbury bought the Chelsea factory and must have carried it on for about fourteen years before removing the models and workmen to Derby. The London business house was in Bedford Street, Covent Garden, then the centre of all that was novel and artistic. A distinctive feature of Derby china is the rich blue border, frequently gilded; the paste or body is white and often painted with flowers and landscapes. It is usually marked with a crown, whence the expression "Crown Derby",

and also with "D" or "Derby" in writing or print (fig. 160). In the early part of this century the china began to deteriorate in quality and finish, and the date of its revival is about 1877; since then it has been produced with the fine old characteristics at popular prices.

Plymouth.—The Plymouth factory is remarkable as having been the first started in England where native materials alone were used, a white



Fig. 160.—Derby Marks. No. 1, Chelsea-Derby (1769–1780); Nos. 3–6, Crown Derby (1780–1815).

clay and "growan" stone, or vitreous granite, having been found on the Camelford Estates in Cornwall. The china made there was ornamented chiefly with groups of shells, limpets, and cockles, and with birds and flowers on cups and saucers. A milky-white and full cobalt-blue are the distinctive colourings. The manufacture was afterwards transferred to Bristol, where the favourite ornamentation consisted of wreaths, very often in laurel-green. The commonest mark is a plain blue cross. The patent was sold late in the last century to a Staffordshire firm.

Liverpool.—Liverpool china is rare and has never been plentiful. It was made for about a century or less, and is chiefly remarkable as affording the first instance of transfer printing on pottery, invented by a certain John Saddler who entered into partnership with Guy Green. Anyone who meets with an old bit of pottery marked "Saddler & Green" may be sure that it has a certain value.

Worcester.—The Worcester Porcelain Company was started in 1751 under Dr Wall, a distinguished physician and chemist, and a "W" figures

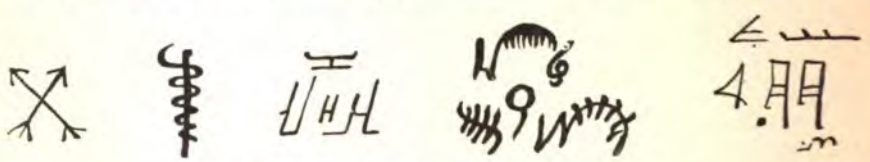


Fig. 161.—Worcester Marks, used previous to 1780.

in many of its works. About 1787 George III. and Queen Charlotte took a fancy to it, thereby setting the fashion; consequently the word "Royal" was prefixed to the name. The business was long carried on by Flight and Barr, and anything marked with those names is indisputably Worcester. Very brilliant blue with a greenish tinge, and what is called salmon scale in blue and long-tailed peacocks in medallions, distinguishes early Worcester. The modern kind is different, much like Copeland ware, and some extremely fine specimens were given to the Queen in 1887 as Jubilee presents by the women of Worcester.

Wedgewood.—Josiah Wedgewood, the founder of the celebrated Etruria works, also came into notice under George III. His first great discovery was the famous cream-coloured or Queen's ware, one of the earliest examples being a breakfast-set and caudle-cup which he presented to Queen Charlotte in 1762. She was so pleased with it that she appointed the maker Queen's potter, ordered a dinner-service, and of course started the vogue. His black, and afterwards his jasper, ware are justly celebrated; the latter was used for making the raised white figures on cream, lavender, blue, and black grounds, always associated with the name of Wedgewood. Many old

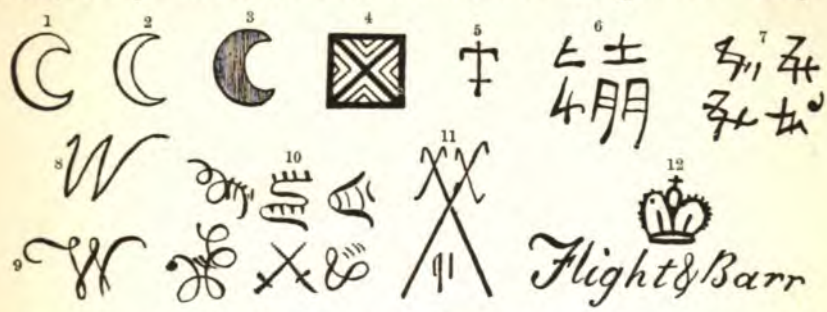


Fig. 162.—Worcester Marks. Nos. 1–11, Marks used during "Doctor Wall" period, 1751–1783 (Dr. Wall died in 1776). Nos. 1 and 2 (open crescent) are the most usual on *printed* wares; No. 3 (filled-in crescent) is found only on *printed* wares. The business was purchased by Flight in 1783; Barr joined in 1793.

Wedgewood plaques and medallions have an artistic value quite apart from their ceramic excellence, because Flaxman the sculptor made models for them. Bentley was for some years in partnership with Wedgewood, and the marks on the ware were simply one or both names without any addition. An initial or the affix "& Co." is a sure sign that the piece so marked is not genuine.

Doulton.—The Lambeth Pottery was founded by Mr. John Doulton in 1818, at Vauxhall, and first became popular at the 1851 Exhibition, though its merit had been previously recognized. It is divided into Doulton ware, on which a design is incised and coloured, dated, and fired once; Lambeth Faience, painted with flowers or original landscapes, and fired twice or more; and Impasta, in which the design is relieved in coloured clays and raised above the surface. Very seldom are two articles made alike, and that in these days of mechanical repetition is distinctly refreshing.

Other English China.—Spode, Copeland, and Minton are all modern artistic potters, and will go down to future generations as past-masters in their own special line of ceramics.

Dresden.—Dresden, in Saxony, is famous for china made at Meissen ever since 1709, when the Elector Augustus, sometimes called the "king of china-maniacs", gave it his powerful support. Very early specimens are dark-red, but a very fine white porcelain succeeded this. Bottcher, Horoldt, and Kändler were successively directors; but in the middle of the century Saxony became one of the battle-grounds of Europe, and the manufacture of Dresden china ceased. However, about 1778 it was revived at the king's

expense, and became distinguished for figures and landscapes. The well-known *bleu-de-roi* background is distinctive of the Marcolini period, just a hundred years. The modern Dresden is often good and cheap, and the marks (fig. 163) are very closely copied. They are chiefly crossed swords;

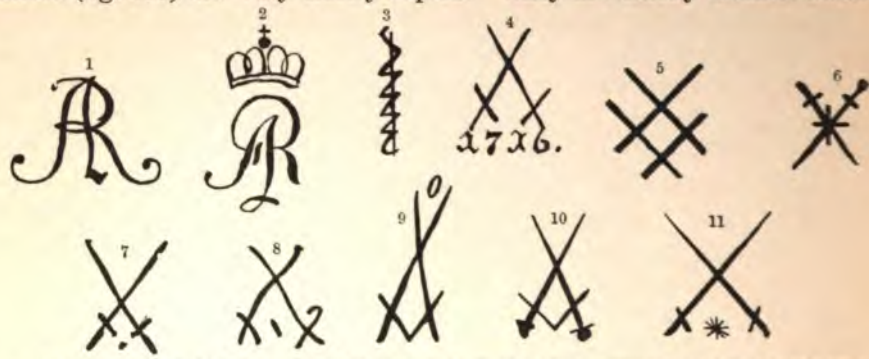


Fig. 163.—Dresden Marks. Nos. 1 and 2, Meissen Ware, 1709-1726 (Augustus Rex: for the king's use); Nos. 3-6, 1715-1720; Nos. 7 and 8, King's Period, 1770; Nos. 9-11, about 1796. One or more stars denote the Marcolini period.

if there are any stars between or above them, the Marcolini period is denoted.

Sèvres.—A volume might be written about Sèvres china, and the mark alone would fill many pages of it. The company was formed in 1745 under Adams, a sculptor, and transferred to Eloy Richard about eight years later. Louis XV. took the greatest interest in it, and paid one-third of the cost, allowing it to be called the *Manufacture Royale de Porcelaine de France.* Two L's reversed formed the regular mark, and a letter of the alphabet was added to indicate the date, beginning with A for the first year. This continued till 1777, which is marked by a Z, and then began a double-letter period with AA, which went on till 1795, when RR was reached and that style of marking ceased. The special colourings were the old *bleu-de-roi,* the turquoise that followed it, the Du Barri or Pompadour pink, the *violet pensée, jaune claire, vert-pomme,* and *vert-pré.* This was the period of the *pâte-tendre,* which fell into disuse owing to the desire to copy the hard paste of Dresden. The secret was purchased in 1761, but even then the paste could hardly have been made in France but for the fact that a poor surgeon's wife near Limoges, looking about for something that would save the expense of soap, discovered a white greasy earth that proved to be true china-clay or kaolin.

Oriental.—The Oriental china now imported so largely seldom has any mark except that of the dealer. It is very ornamental, and serves decorative purposes just as well as if it were much more expensive. A great deal is manufactured simply for the English, or rather European, market; but it may generally be taken that anything marked with a crescent comes from a Mohammedan country, and that red Chinese characters within a square really denote a Chinese origin.

Persian.—Persian or "Gombroon" ware, so called from the name of the

port on the Persian Gulf from which it is shipped, may generally be known by its floral decoration, hyacinths and carnations being the favourite flowers, though the cypress is often introduced. The colours look very like enamels. Flat surfaces, such as tiles, are sometimes adorned with words and phrases from the Koran.

Arrangement for Ornamentation.—Plaques of Limoges enamel and of Palissy ware—the latter chiefly decorated with water insects, reptiles, and aquatic weeds—were very costly, and intended more as frameless pictures than for any other purposes. They have been largely imitated in modern Faience.

Wedgewood plaques were not only hung up, but, as the side-table of former days was then giving way to the sideboard of the Sheraton period, they were not infrequently ranged on it instead of silver. At the present time the possessors of a few dessert or dinner dishes of old Dresden, Wedgewood, or Spode, hang them on the walls, where all their beauties are displayed. Proper wires for this purpose are sold at prices ranging from about 6*d.* to 1*s.* according to size. Plates or plaques, all of one size, though of diverse colours and designs, look well when put up as a frieze, but in this case the frieze rail should be made strong and with a ledge, which keeps them from slipping, and helps to support their weight.

A group of five plates looks bald, but one of seven looks full and handsome if hung on a suitable vacant wall space, one in the middle, and the other six round it; the best arrangement for a set of three is triangular—two on the same horizontal line, and the third above, midway between them. Plates with a good deal of fine detail should never be hung too high up, but should be on a level with the eye, so that their beauties may be seen and enjoyed.

Etagères, or sets of small shelves with raised edges, are only suitable for little bits of china, such as cups and saucers and fancy jars. They should always be placed in positions where the shoulders and head of a tall person are not liable to come into contact with them.

Tear bottles, in bright blue or yellow, with big, short, globular bodies and long necks, are capital for placing on brackets in dark corners, as they introduce an element of brightness.

Ancient punch-bowls, and the great jars in which our grandmothers used to keep pot-pourri, look well on a sideboard or cabinet or on the top of a high bookcase or cupboard, but diminutive ornaments below make them look top-heavy.

Really precious china should be arranged on the shelves of cabinets with locked glass doors, of which the owner should keep the key. Servants do not recognize the value of such things, and the operations of dusting and washing, which must be gone through sometimes, should always be conducted by one of the family.

Glass.—About glass there is very little to say. The lovely iridescent Salviati glass, which derives its colours from the fusion of metals, is extremely ornamental both from its own intrinsic beauty and from the

elegance of the forms in which it is made. Useful things are made of it, but it is more suitable for looking at than for handling. Bohemian and Hungarian glass are of very similar character.

DECORATING WOODWORK.

There is always a good deal of unadorned woodwork about a house, both in the building itself and in the articles of furniture. This may easily be so ornamented as to appear more pleasing to the eye and add to the general effect. The following are some of the most useful and effective kinds of ornamentation.

Varnishing.—The principal kinds of varnish are oak, copal, paper, and carriage. Oak is the best kind to use for general purposes. The surface to be varnished must first of all be made quite smooth and clean, and all grease carefully removed by rubbing with glass-paper stretched over a thick piece of cork about four inches square. All soft woods, such as deal, pine, sycamore, and chestnut, must be sized before the varnish is applied, in order to fill up the pores and prevent the fluid from sinking in. Although the harder kinds of woods, such as oak, walnut, and mahogany, do not as a rule absolutely require sizing, it certainly improves them, as it makes the surface more glossy.

The size, which is an inferior kind of glue, is mixed with boiling water in the proportion of one part of size to about eight parts of water. An ordinary glue-pot may be used with advantage for this purpose. The water is stirred until all the size is dissolved; it is then quickly applied with an ordinary paint-brush, the article being afterwards set on one side for some hours in a place free from dust. The surface is again rubbed over with the finest glass-paper, and the varnish is laid on evenly and thinly with a brush with fine bristles. To prevent them from dropping out, it is best to bind them up tightly with string near the part where they are fastened into the handle. The brush must be drawn up and down the grain and not across it. In the case of soft woods, when the varnish is quite dry and hard any rough parts are smoothed with fine sand-paper, and a second coat is applied; one is sufficient for hard woods if the size has been properly laid on. At the same time the more often the process of glass-papering and varnishing is repeated, the more satisfactory the work is likely to be. The varnish must be kept in a well-corked bottle, otherwise it will become thick and useless. When the brush is finished with, it should be squeezed and then well washed in turpentine.

Staining.—The principal kinds of "stains" are light-oak, dark-oak, mahogany, walnut, rose-wood, and ebony. The surface having been made quite smooth, a coat of size should be applied if the wood is soft. Particular care must be taken not to let any lumps of undissolved size get on the wood, also to keep it quite free from grease. The stains are sold ready

mixed, and are best applied with a clean flat paint-brush. They must be laid on quickly and evenly, and each part of the work should be finished before the next is begun. The number of coats to be applied depends upon the depth of colour which it is desired to obtain; it is therefore advisable to experiment first on a piece of waste wood to see how many coats are necessary. If a very pale tint is required, water can be mixed with the staining fluid to lighten it. When the work is finished, a coat of varnish should be applied, as this will bring out the colour better. To ebonize a surface it is best to use ebonizing liquid, which is sold in bottles. Two coats are usually required, and when these are dry a coat of varnish should be added.

French Polishing.—French polish has many advantages over varnish; it looks more glossy and brings out the grain of the wood, but it is more difficult to apply. It cannot be used on deal, pine, and other soft woods, as it sinks into the pores, but oak, mahogany, walnut, and rose-wood take it very well. The surface is first made quite smooth with coarse glass-paper, and afterwards with the finest glass-paper, until there is not a mark or a scratch left upon it. To apply the polish, a tuft of cotton-wool is saturated with it and wrapped up in a piece of linen rag about eight inches square so as to form a rubber. This is then well rubbed all over the wood, more polish being added to the wool as soon as it gets dry. When the whole is covered with polish, it is well rubbed all over with the rubber for some minutes, and afterwards with the finest glass-paper. The latter should have been previously used to take off its sharp edge. Another coat is then applied, but this time a few drops of sweet-oil are put on the outside of the rubber where it comes in contact with the wood. The rubbing should be done in circles as in cleaning a window, and considerable pressure must be applied. The wood will soon begin to shine, but the rubbing must be continued until it appears like a looking-glass when looked at obliquely. Care must be taken not to apply too much polish, otherwise the wood will get sticky and have a yellowish colour. If this happens, it will be necessary to use the glass-paper again and then to apply a fresh coat.

Darkening Wood with Ammonia.—Many woods, and especially oak, may be darkened and improved in colour by washing over with dilute ammonia. Some kinds of carved oak are much too light in colour when fresh from the workshop, and require darkening to bring out the pattern. The ammonia is applied with a brush or feather, and will give the work a well-seasoned appearance. More than one application is necessary to get a rich depth of colour. It is best to use very dilute ammonia, repeating the process until the requisite shade is obtained.

Gilding.—The cheapest way of gilding is to use gold-paint. It is sold as a liquid, and also as a powder which must be mixed with a liquid medium. Gold-paint answers very well for flat surfaces, but applying it to ornamental work is rather a troublesome matter. The paint is well stirred up and laid on quickly and evenly with a camel-hair brush. Unless care

be taken not to lay it on too thickly, much more paint will be used than is necessary. When wood-work has to be picked out in gold, this had better be done first, as to paint fine work with it is difficult. The other colours will then cover the parts which may happen to have been smeared. A coat of varnish when the paint is quite dry will help to preserve it.

Bronze-powder is applied in the same manner. Gold-leaf and Dutch gold are obtained in books containing about twenty-four leaves, each four inches square. The Dutch metal is much cheaper, as it is only an alloy of copper, but it soon gets tarnished, especially in houses where gas is burnt. As both kinds are extremely light and fragile, all draught must be excluded while one is working with them. The surface to be gilded is coated with gold-size, and when this is nearly dry the leaf is laid on. It must not be touched with the fingers, or with anything that is at all greasy or damp, but is best removed from the book with a sheet of paper or with a knife. It is then gently blown to make it lie straight, and is cut into pieces of the required size. They are applied by means of a camel-hair brush, which has first been breathed on to make it damp and so cause them to adhere to it. Each piece of leaf, after having been slightly shaken to make it flat, is laid in position, care being taken that it does not wrinkle. When all the surface is covered, the leaf is pressed down with a "bob", and rubbed over with a ball of soft linen rag to smooth it out. Any cracks or holes must be covered with small pieces, which are cut off and applied in the same manner.

Designs on Woodwork.—A very easy way of improving the appearance of all kinds of woodwork is to cut designs upon it. Almost any pattern, floral or otherwise, and even fretwork patterns and those used for poker-work, will do. The wood being made quite smooth, a piece of blue tracing-cloth is laid on it, and the pattern is fastened into it in the right position with drawing-pins. A sharp pencil is run along every line of the pattern, and, on removing the latter, the design will be found marked out on the wood. If the pattern is to be copied from a book, it must be drawn on the wood with a pencil. The design is cut to the same depth throughout with a small, half-round or v-shaped gouge, of the shape shown in fig. 164, which may be obtained at the shop of any tool merchant. Care must be taken not to run off the line, and unless the tool is very sharp the work will not look well. To keep it well under control, the handle should be held in one hand while the fingers of the other press it on the wood near the edge. When the cutting is finished, the lines are filled in with gold or ordinary paint, or are left plain.

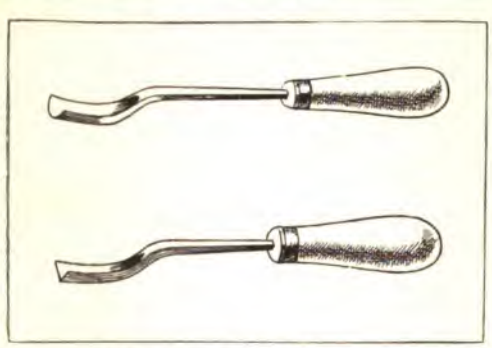


Fig. 164.—Tools for Wood-carving.

Inlaying.—Inlaying requires some skill to make it look effective, but is a good way of ornamenting woodwork, which need only be smooth enough to take glue. The design used may be floral or geometrical; any other requires a good deal of skill to execute. Fig. 165 represents one of the simplest geometrical designs. The pattern is first of all drawn out on the wood, and the pieces are cut to fit it. In the case of geometrical patterns the pieces can be cut square, rectangular, or otherwise with the aid of the shooting-board (fig. 166), but when other patterns are used they must be cut out with a fret-saw, and afterwards trimmed with a spoke-shave (see "Family Tool Chest", vol. iii.). The wood used may be from $\frac{1}{4}$ to $\frac{1}{2}$ inch in thickness. When all the pieces are cut out, the surface which is to be covered is washed over with glue, after which the pieces are quickly laid on in their proper places. It is best to glue the edges of each piece, as any spaces which arise from misfits are thus filled up. Weights are laid on the top, and the whole is set on one side for twenty-four hours to dry. The superfluous glue is then removed, and the surface is carefully planed until quite level, and afterwards varnished or polished. Very effective designs can be executed in white and black woods in this manner. When the work is well done, they look extremely handsome.

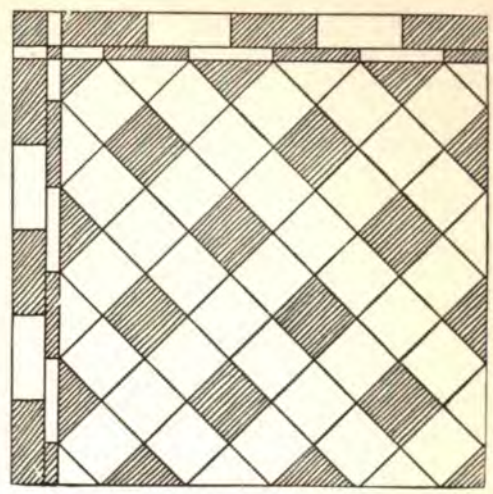


Fig. 165.—Simple Pattern for Inlaying.

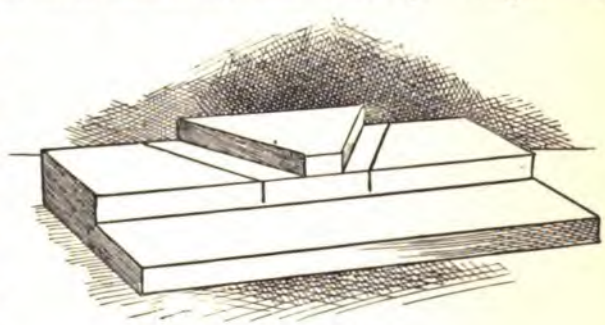


Fig. 166.—Shooting-board.

Artistic Painting on Wood.—Painting is another effective way of ornamenting the panels of doors and cupboards, the tops of drawing-room tables, brackets, bellows, and other woodwork articles. Suitable designs for panels can be obtained at most of the shops where artists' materials are sold. This method of decoration occupies a good deal of time, and is especially suitable for ladies. It is perhaps best to paint the design on canvas or satin, and fasten the latter with brass nails or tacks into the panel.

DECORATIVE SUGGESTIONS FOR AMATEURS.

There are not a few persons who, while possessing a considerable amount of cultured taste, and an equivalent degree of skill in some particular art or craft, do not realize how their gifts may best be turned to good account. A great many people can "paint a little": that is to say, they have what is commonly known as an "eye" for colour and form, and some command of the pencil and brush. Nevertheless, they lack sufficient natural ability or training, or both, to attain any success in the highest branches of art, hence are prone to confine themselves to the mere adornment of more or less useless little personal trifles, bazaar articles, and the like, entirely overlooking the many ways in which they might add to the real beauty of their homes.

Painting.—The amateur artist, however, should not be too ambitious in his first attempts at decorative painting. Unless he is exceptionally gifted, in which case he will need no advice on the matter, he should leave figure subjects alone, and choose in preference simple formal designs treated decoratively, not pictorially, or, if he objects to this style, the conventional or realistic representation of flowers as his skill renders advisable. For instance, screens, if painted by the average amateur artist with scenes *à la Watteau*, are often almost ludicrously bad, whereas if the same painters had chosen a purely conventional but graceful design of an Italian or even Celtic type, the result might have been excellent. The best background for such designs is a dull gold paper, and the painting should be carried out in rich but rather subdued tones, reproducing, as far as possible, the colour-effect of an old Spanish leather screen. Flowers treated conventionally, and painted "flat" in one or two shades of a colour on a contrasting ground, make an effective decoration for door-panels, dados, and friezes, especially if the whole of the design is outlined with gold or black. Arabesque designs, or formal *motifs*, such as the Tudor rose (fig. 167), fleur-de-lis, or Staffordshire knot, painted in the same style, can be introduced in a frieze to divide mottoes, proverbs or quotations, suited to the special purpose of the room, and executed in bold and fanciful, but legible, lettering.

If the artist is clever at painting flowers according to their natural habit of growth, a screen for a delicately-furnished drawing-room might have the frame and lower half of its panels made of white enamelled wood painted with garlands of pink roses or convolvuli tied with blue ribbons, the trails winding round the frame and surrounding the clear glass filling the upper portion of the panels. An overmantel for the same room could be designed to match, with three oval mirrors set in white panelling, painted with festoons of flowers and love-knots. Little tables and cabinets, decorated in the Vernis Martin style, are well suited to rooms fitted up in a dainty French style, but this method of painting is not easy of execution, and unless it can be well done should not be attempted.

Stencilling need not be despised if the skill required to draw a good

pattern is lacking. A bold stencil design, touched up if necessary by the brush after the removal of the plate, can be used for a frieze with excellent



Fig. 167.—Studies of the Rose Conventionalized.*



Fig. 168.—Stencil Design (Peony Flowers and Leaves)—Japanese Style.*

results; and if a set of Japanese stencil plates (fig. 168) can be obtained, they will make a most effective and pleasing decoration for a small sitting-

* Reduced from Audsley's *Practical Decorator* (Blackie & Son, Limited).

room or smoking-room. When panels of doors, cabinets, overmantels, and the like are ornamented in this way, the whole or part of the design may be raised with gesso-paste after the stencilling has been done, and then coloured according to taste. Stencilling, too, may be applied to the ornamentation of textile fabrics, like art-linen, arras, and even sackcloth, and the pattern may be outlined with thick gold thread, or with rope-stitching in coarse flax. If the material is to be strained tightly, as in the case of a screen-covering or a dado, ordinary enamel may be used for the stencilling, but if the drapery is to hang in folds this would detract from its flexibility,

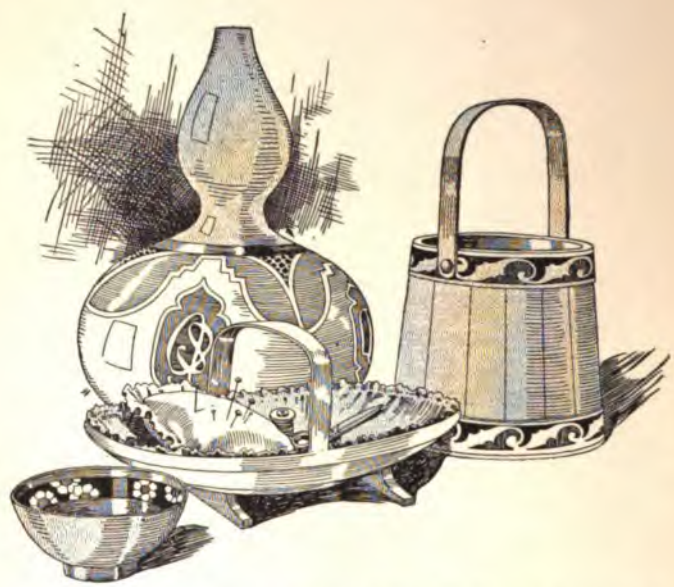


Fig. 169.—Suggestions for Decorative Treatment of Various Articles—Earthenware jug, wooden basket, &c.

and one of the stains or paints specially prepared for such work should be substituted for the enamel. Bell-pulls of webbing look well if treated in this way.

Water-colour sketches can be used in other ways than hanging them on the wall. They may be mounted in screens or overmantels, surrounded by velvet, brocade, or ornamented leather, or they may be sunk in the panelling at the back of a cosy corner.

Among smaller subjects for ornamental painting are lamp and candle shades of gauze, which should be decorated in transparent colours with flowers or small landscapes, a monogram in a wreath of small blossoms making a pretty design for a set of candle shades. All kinds of unglazed earthenware jars and pitchers, if of good shape, can be painted with bold designs of a Moorish type in one bright colour, outlined with gold or black; and wooden Sussex "trug" baskets and small flour-barrels may be made sufficiently ornamental to hold needlework in the drawing-room by means

of either conventional or floral designs on a coloured ground, a lining of soft silk or satin being afterwards added (fig. 169). Dessert and tea services of plain white china afford plenty of scope for a display of the painter's skill; so do tiles for all purposes, from tea-pot stands to fireplace sides and hearths, but as these must be "fired", success at the first attempt is scarcely



Fig. 170.

to be expected, and a few experiments should be made before an important piece of work is embarked upon. Oval tea-trays, decorated in the Vernis Martin style, are exceedingly pretty if the work is well done.

Poker-work.—Poker-work had at one time fallen into disrepute owing to the bad specimens which became general on its first introduction. Yet it is an effective form of decoration if discreetly used, either alone or in combination with staining. A plain wooden mantel-piece, for example, might be ornamented with a bold conventional design carried round the grate opening, while the overmantel could be made of panelling the width of the shelf, and 2 feet 6 inches to 3 feet high, with three narrow perpen-

dicular openings to be filled with embroidery or a handsome leather-paper (fig. 170). There should be a narrow shelf at the top for china, and the poker-work ornamentation should be carried all round the panelling, with, perhaps, the addition of a motto or quotation burnt in fanciful lettering along the top. The overmantel might be replaced by a long, low mirror in a wide, flat-pokered frame, the motto in this case being inscribed on the flat piece of wood above the grate-opening immediately under the mantel-piece. A third plan would be to leave the chimney-piece and overmantel frame undecorated, but to insert in the latter small panels pokered with landscapes. Sycamore, holly, lime, box, and pear are the best woods to choose for these small panels, as it is essential that the surface should be very smooth. The background of poker-painted articles can be stained green, walnut, mahogany, or oak-brown, and the design itself may be stained in several colours, or in a single one contrasting rather sharply with the ground. Either marquetry stains or water-colour can be used; the latter are best for small objects. Poker-work can be effectively applied to screen-frames, small benches and tables, stools, cabinet-panels, small china and medicine cupboards, and many other things. It may also be introduced in the actual decoration of a room, a bold burnt-in design making a good finish to a plain stained wood dado, for example. Poker-work on leather is often very handsome when combined with staining, but even alone it has a pleasing appearance. Seats for chairs and benches fastened down with copper-headed nails, or laced on with leather thongs, loose cushions for window-seats, and footstools, may be successfully decorated in this way, while panels of leather, pokered, stained, incised, or embossed, may be mounted as screens, or let into dados and overmantels. The best designs for such pieces of work are emblematic figures—such as the four Seasons—or groups of foliage or fruit conventionally treated.

Carving.—The ability to carve a little is decidedly valuable when home-decorating is undertaken. As in painting, however, it is best to begin in a small way by attempting only designs of a simple but not necessarily feeble and ineffective type. Wide flat frames for pictures or mirrors are easy to ornament, at first with unambitious formal patterns, later with garlands of flower and foliage, which may be painted white if to hang in a room furnished in a light and fanciful way. Fender-stools, long, low, and flat, with tops of embroidery, old brocade or decorated leather; square box-footstools, bellows, small tubs or half-barrels to serve as palm-pots—all these can be made ornamental without much labour. Shelves for china may be carved along their front edges, and supported by carved brackets; overdoors can be carved with appropriate quotations referring to greeting and welcome, and when some experience has been obtained, not only in the handling of the tools, but in the choice and adaptation of design, the decoration of furniture of all kinds may be attempted successfully. The general lines of ornamentation should follow the grain of the wood as far as possible, and care must be taken that whether the article to be carved is large or small, it is of sound construction. Neat joinery-work is as impor-

tant as elaborate ornamentation; the latter can never compensate for gaping joints, badly-cut mitres, crooked key-plates, and the general untidiness which unfortunately so often disfigures amateur work.

Carpentering.—What a clever home-carpenter cannot do is hard to say. He can make pieces of furniture to be decorated by one or other of the methods already described, cut shelves for china and books, fit window-seats, convert ugly and useless things into beautiful and serviceable ones, and—this is not the least of his virtues—he can restore and rejuvenate old furniture picked up at sales and in second-hand shops.

A tolerably skilful amateur carpenter can make, without much difficulty, a comfortable fireside settle for hall use. It should be just a wide bench about four feet long, with a high back carried down to the ground, sides of the same height, and legs either turned or square-tapered under the front corners of the seat. Such a settle can be ornamented with carving or poker-work, or merely stained and polished, and it should be supplied with a seat-mattress and a couple of loose cushions, covered either with leather or a strong tapestry of antique design. A piano packing-case can be converted into a similar kind of settle if the lid is removed and a seat fitted inside it. All sorts of packing-cases may be turned to account by a clever carpenter. Several ways of doing this are described under "Flats", vol. i. Small lidless boxes, measuring about 18 or 19 inches long, 8 to 12 inches wide, and 4 to 6 inches deep, can be converted into simple over-mantels. Two may be fixed side by side the long way up, with a narrow mirror in a flat reeded frame between them, and a long shelf placed across the top of the three. The boxes should be fitted up with little shelves and lined with leather-paper or velveteen, while the outside may be stained, enamelled, carved, or pokered. Or two similar cases can be set one on top of the other so as to form a T, and fixed above the mantel-shelf. The crossway box at the top should be divided into little pigeon-holes for ornaments by means of small fretwork partitions, and fretwork corner-pieces can also be fitted into the shelves of the upright box. Boxes and cases of all kinds can be effectively treated by covering them with brocade or tapestry, fastened with rows of closely-set brass or copper-headed nails arranged to form patterns. Wooden trunks with dome tops, such as servants used years ago, make quite imposing-looking chests if covered with old-fashioned-looking tapestry.

Metal-work.—Ribbon or bent-iron work, in spite of the popularity it has had of late years, is almost the least satisfactory of the various kinds of metal-work which are specially suitable for amateurs. The designs are too often feeble and inappropriate, and the way in which the metal is pinched and tortured into innumerable little scrolls and zigzags is apt to be irritating to an artistic eye. But if simple designs with flowing curves are chosen, many really ornamental as well as useful things can be made, among others, stands for flower-pots and lamps (fig. 172), *grilles* for doors, music-racks, candlesticks, and bell-pulls. *Repoussé* work, both in brass and copper, may be counted among the most decorative of crafts. Plaques for



Fig. 171.—Salver in Copper *Repoussé*.

general appearance of their rooms would be very much improved if, instead of crowding every table with more or less unsatisfactory likenesses of their friends, they were to utilize some landscapes, flower-studies, or views of well-known or picturesque buildings in the actual decoration of the apartment. A long panel, holding from five to a dozen cabinet-sized gray platinotypes in a broad frame stained dull-green, might be fixed about 12 or 14 inches above the mantel-shelf, the space between being filled with a plain, stretched piece of velvet in a lighter shade of the same green. If the platinotypes are sepia-coloured instead of gray, the frames should be dark-brown, and the velvet either brown, turquoise, or gold colour. A large photograph, sunk in the middle of a velvet panel, with smaller photographs inclosed in a narrow wooden moulding all round, would also fill up the space over the chimney-piece satisfactorily. Photographs might also be arranged above a dado, prac-

sideboards and overmantels (fig. 171), door-fittings of all kinds, card-trays, bowls, sun-dials, bellows—these are but a few of the articles that may be ornamented in this way. Hammered-copper fronts for window-boxes look extremely well, and pretty candle-shades can be made of very thin metal, partly pierced, partly *repoussé*.

Photography.—Amateur photographers seldom appear to realize the decorative possibilities of their art. But the



Fig. 172.—Bent-iron-work Bracket and Lamp-stand.



Screen

Casket Book-cover Book-cover Casket

EXAMPLES OF EMBROIDERY—FROM THE ROYAL SCHOOL OF ART NEEDLEWORK, SOUTH KENSINGTON

The background consists of a wall-hanging in coarse outline crewel on velvet



tically forming part of it, or at the back of a cosy corner, or in a screen.

Embroidery.—Much may be done to beautify a house by dexterous and judicious use of the "needle small and slender". Curtains and hangings of all kinds may be embroidered. For drawing-room use they may be of serge or of diagonal cloth, ornamented with a bold border worked in crewels, with powderings in a Japanese style of rising suns executed in gold or copper thread, or with appliqué of velvet outlined with gold. Curtains of ivory or pale primrose satin sheeting, embroidered with a Louis XVI. design of flowers and love-knots in delicate-coloured silks, are suitable for a drawing-room furnished in a dainty French style. To go with old English oak furniture, more appropriate hangings might be made of thick white linen, the embroidery design being of the heavy style, generally, although not altogether correctly, known as Elizabethan, and executed in fine crewels. Curtains of serge with bands of creamy house-flannel embroidered in thick wool, arranged across top and bottom, are inexpensive and effective; while for bedrooms, printed Bolton sheeting with its pattern worked up with stitchery, makes fresh-looking and pretty hangings. Curtains of cream twilled cotton sheeting, ornamented with appliqué of red Turkey twill, are bright and cheerful in a nursery, and wash well with a moderate amount of care. Art linen in the thicker makes, with borders and powderings in appliqué linen of a contrasting colour to the ground, or embroidered with flax thread or ingrain cotton, may also be suggested for bedroom draperies.

Panels of embroidery can be introduced in the decoration of a room in several ways. They can be, as has been already suggested, let into over-mantels and mounted as screens; they may replace the always more or less uninteresting front of an upright piano; or if pictures are scarce, they can be mounted in flat frames and used as substitutes. For upright panels, symbolical figures representing Faith, Hope, and Charity, Wisdom and Justice, the Seasons, or the Elements, are effective if worked on cream or string-coloured linen in outline only in two or at most three shades of sepia-brown, the background being closely darned. Very skilful embroideresses may venture on working the figures "solid" in natural colours, but the simpler method is a safer one for ordinary people to adopt. A pretty design for a piano front is composed of a lyre, some branches of laurel, and a music-scroll with a few bars of some celebrated melody, the whole surrounded by a simulated ribbon, and worked out with fine silks on a foundation of thick upholstery satin. Bell-ropes of satin ribbon embroidered with a design of knotted ribbon connecting little bunches of flowers are charming for a drawing-room or a boudoir. In other rooms, bell-pulls of webbing or of cocoa-nut binding, worked with a running design in chain-stitch with thick cotton, are inexpensive and pretty.

A really nicely embroidered coverlet adds much to the appearance of a bedroom. If time is no object a lovely spread can be made of white linen traced with an all-over design in outline stitch, the whole of the ground

being covered either with close-darning or with one or other of the many "filling" or "background" stitches which our foremothers have handed down to us. Linen coverlets, too, may be ornamented with appliqué, or the material can be cut into squares or strips and embroidered either in cross- or satin-stitch with ingrain cottons, these sections being joined with insertions of coarse Russian linen lace, and the whole coverlet lined with colour. If the wall-paper happens to be a floral one, it is a good idea to take it as a key-note for the embroideries in the room, but the pattern should not be

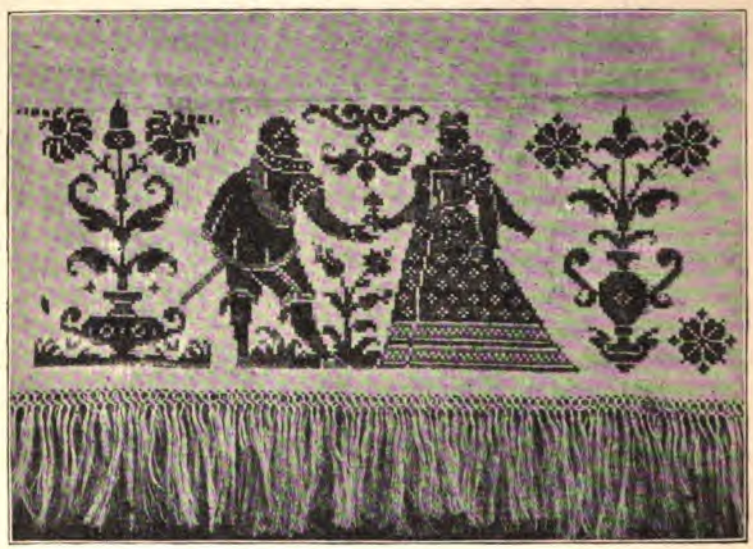


Fig. 173.—Towel Cover—Specimen of Cross-Stitch Embroidery.

(By permission of Broderie Russe et Moldave, Paris and London.)

slavishly copied, as a design intended to be upright seldom looks well seen on the flat. Suppose, for example, the flowers represented in the paper were to be yellow daffodils, the bed-spread could be powdered all over with daffodils, the toilet-slips and towel-cover could have borders to correspond, bunches of daffodils should be worked on the sides of the hot-water can cosy and in one corner of the bath-rug, and even the set of towels for use in that room might be marked with a daffodil in the corner beneath the embroidered monogram or initial.

The best way of ornamenting towels intended for regular use is with bands of cross-stitch embroidery worked in ingrain cotton, red or blue. Towels can be bought ready traced for working in this way, but it is a far cheaper plan to tack strips of Berlin canvas across the ends of ordinary huckaback or damask towels, to work through this, and to pull the threads of the canvas out on the completion of the embroidery.

A pretty little fireplace-screen for use in summer can be made on the lines of a three-fold clothes-horse in miniature. It should have double rails at the top, between which are slipped loose strips of embroidered material,

each exactly the right size to fill the panel. An agreeable variety may be obtained by having two or three sets of these little slips. One might be of Chinese embroidery, another of silk worked with a floral design, and a third of brocade, enriched with gold thread and spangles.

Seats for Chippendale chairs, or loose cushions for Elizabethan ones; curtains for the backs of pianos or to hang in recesses behind corners; portières and mantel-draperies—these are only a few of the innumerable things which a clever and industrious needlewoman may make beautiful for the adornment of her home.

*** Fig. 171 is reproduced by courtesy of the Chiswick School of Arts and Crafts, 9 Harrington Road, Kensington, London; and fig. 172, by courtesy of the Decorative Arts Association, 369 Oxford Street, London, W.

THE DECORATIVE ARRANGEMENT OF PLANTS IN THE HOUSE.

PLANTS IN POTS.

The comparatively modern fashion of utilizing growing plants largely in the adornment of rooms, halls, and corridors, is a very pleasing one, provided that it be followed with discretion. But it is certainly not discreetly followed if the solitary and not over-large window of a room is completely blocked with gaunt geraniums and straggling ferns on rickety stands, if the only substantial table is filled up by a disproportionately big palm, or if the unlucky plants are left untended from the day they come from the florist's to that on which their miserable, shrivelled remains are cast into the dust-bin.

Pot Plants for the House.—With a slightly-heated greenhouse to which the plants can be regularly returned for rest and "treatment", the choice of pot plants for room decoration is practically unlimited. But the list of those that will thrive for any appreciable time in the arid, gas-polluted atmosphere of a town house is not a long one. It is best to rely on such well-known and useful plants as the india-rubber plant; the aspidistra or parlour palm, both the green and the prettier, if less robust, striped kind; the hardier palms, especially the kentias; and ferns, combining them according to the season of the year with flowering plants in pots. With ferns may be included the selaginellas and club-mosses, although it is not advisable to have too many of these moisture-needing things in a living-room during the winter. Among other good foliage-plants are the dracænas, which will not, however, do well in a room unheated at night in frosty weather, and aralias; while for hanging baskets, choice can be made of stone-crops, house-leeks, and saxifrages, some of the oddest-looking of the cacti, and two or three varieties of campanulas, besides the small-leaved varieties of ivy, tradescantia, and musk. Maurandya is another excellent plant for the purpose. Dwarf evergreens, such as box, euonymus, and cypress, are cheaper than greenhouse plants, and not ineffective, and pots of the variegated Indian corn and grasses may be added to the list.

The Arrangement of Plants Indoors.—In houses of moderate rental the rooms are rarely sufficiently large for any attempt at elaborate groupings of growing plants to be successful, but occasionally one side of a bow-window or some other fairly well-lighted corner can be devoted to the display of a few good specimens. Instead of the wire flower-stand of twenty years ago, or the often ugly virgin-cork affair that was its immediate successor, a wooden stand should be made to fit into the particular recess or corner. It should have from two to four shelves, graduated in width, and it ought to be strongly, though not clumsily, made in the simplest and most unobtrusive design. To render it as inconspicuous as possible it should be painted dull leaf-green, or else should match the wood-work or wall against which it is to be placed. On this stand are arranged palms and ferns, the foliage of those on one shelf concealing the pots of those above, the plants on the bottom shelf being dropped into outer pots of hammered copper or brass, or of artistic earthenware. Between the larger foliage-plants should be set pots of growing flowers, and tucked into every available corner should be smaller pots of trailing plants and feathery mosses, the whole forming a well-proportioned group, tapering upwards from the low-growing sedums and selaginellas near the ground to the palms, and, perhaps, tall white or orange lilies on the top ledge. Care must be taken not to make this arrangement too formal, and it is not suitable for a very small room.

Plants on the Landing.—A corner arrangement which has a particularly effective appearance in a hall or on a landing (fig. 174) is carried out by fixing, between the angles of the walls, a tall mirror—say 6 to 7 feet high—in a wide, flat, wooden frame, filling in the space between it and the walls at the top with a triangular piece of wood, on which may stand a spreading fern. To the broad frame of the mirror should be fixed at intervals either small half-moon shelves for little pots, or gallows-brackets of wrought-iron or copper, to which baskets of trailing plants may be hung. It would be possible to carry out this arrangement very charmingly in summer by using the white Ligurian Bell-flower (*Campanula isophylla*) and pink ivy-leaved geraniums for the basket, placing at the foot of the mirror two or three pots of the miniature or Chinese roses, pink or crimson, mingled with ferns and small palms. These may be set in a trough of hammered copper, or in art pots supported by a little bench, enamelled or stained to match the mirror frame. A simpler corner arrangement consists of three or four triangular shelves, graduated in size, fixed one above the other to hold pot plants and shallow pans of Creeping-jenny, Mother-of-thousands, or some other pretty old-fashioned trailer. Rough, red pottery receptacles of picturesque shape, in which the plants can really grow, are not to be despised for use in situations such as these.

Plants for the Fireplace.—House-mistresses, careful of their grates, rarely approve of summer fireplace decorations that entail the use of many growing plants. The chimney must be blocked by closing the register tightly; even then the situation is not a particularly healthy one for plants, and they should be changed at frequent intervals. The grate, however, will

not suffer seriously from the proximity of the flowers if it is very slightly smeared with vaseline or paraffin. The hearth should be fitted with a tray of zinc or tin, and the fender, if a steel one, replaced by a wooden



Fig. 174.—Corner Arrangement for Hall or Landing.

curb covered with lincrusta and painted some wholly unobtrusive tint—cream, brown, or dull-green, for instance; one of virgin-cork is admissible, although scarcely desirable here. A narrow tin trough, made in several sections for convenience of removal, can be constructed to fit inside the fender, this trough, which must, of course, be pierced for drainage, being used for small ferns and any other suitable plants. The tray itself must be

filled with pot plants, carefully, but not too formally graduated in size up to tall ferns, and foliage-plants at the back, all bare spots being filled with "thumb pots" of seedling ferns and masses of feathery green moss kept fresh by occasional slight watering. It is desirable to make a background for this arrangement by fitting the grate-opening with a panel of art-linen or fluted pongee silk (it would be unwise to use an expensive material) stretched on a light wooden framework. Japanese leather-paper or anaglypta could be used in place of a textile fabric if preferred.

Climbing Plants Indoors.—Ivy grown in pots or troughs is useful for room decoration. It can be trained to cover a square of wire-netting for a fireplace screen, or over an arch of wire fixed between two pots, a basket with a trailing plant being hung from the centre of the span. Or it may be encouraged to climb round a staircase or landing window, although this idea is perhaps more decorative than cleanly. Tall tropæolums, too, can be trained in this way, and if intelligently treated will be gay for months.

Receptacles for Pot Plants.—Gallows-brackets of hammered iron and copper standing out from the wall and supporting copper bowls of Venetian design; smaller receptacles of Moorish brass-work; china pots of all kinds, from Japanese ones at 6*d.* each to those of old Lowestoft ware—all can be pressed into service to hold growing plants. A very simple but picturesque receptacle is one of the common green-rush tool-baskets such as are often to be found in country towns. This, when an oval piece of wood or tin is put inside to make a firm base, can be filled with pots of hardy ferns and set on the hearth of an old-fashioned grate, or in a corner of the hall. The basket must on no account be trimmed with ribbons or wisps of art-muslin, and it should be a new one made of fresh green rushes.

Plants for Halls.—Suitable plants for very badly-lit halls and staircases are aralias, aspidistras (especially the variegated kind), the more ornamental kinds of euonymus, Australian myrtle, and the common laurustinus, to which may of course be added ferns of every kind, but especially the hart's-tongues in their several varieties.

Seedling ferns and club-mosses should be encouraged to grow round palms and large ferns. They will conceal the earth and pot, look pretty, and do no harm, if the young ferns are removed and potted up as soon as they attain any considerable size.

CUT FLOWERS.

Twenty years ago the floral decoration of a room was considered complete if half a dozen "specimen" glasses were dotted about on the table, or ranged in a stiff and formal row on the mantel-shelf, each ugly little vase holding a solitary camellia, a short-stalked full-blown rose, or a tightly-tied bunch of violets. Ideas on the subject have developed since those days, yet even now it is rare to see a group of flowers thoroughly well-arranged, perfect not only in colour-harmony but also in grace of outline.

The modern floral-decorator, be she amateur or professional, is apt to

over-estimate the value of colour when she is designing her arrangement. Hence she crowds her bowls and jars with closely-packed masses of blossoms and foliage until the result is a mere chaos of colour, and the individual beauty of each flower and spray of foliage, to say nothing of any suggestion of natural growth, is quite lost sight of. Concerning the value of form in flower arrangement a lesson may be learnt from the Japanese, for, although their peculiar style of decoration can rarely be successfully copied in exact detail by European hands, it exemplifies in perfection how graceful may be a simple group that consists merely of a spray or two of some flowering plant, a tree branch, or a mere handful of flowers.

Cut Flowers and their Background.—The background of the vase, bowl, jar, or basket is rarely sufficiently considered. It is not at all uncommon to see a great beau-pot of crimson peonies set against a brick-red wall-paper, a cluster of brilliant scarlet gladioli against a salmon-pink curtain, or a bowl of stiff magenta sweet-williams in a dainty blue-and-gold Louis XVI. drawing-room. Now if, instead of these discordant combinations, the brick-red paper were to be the background to a few tall white flowers placed in a group of foliage, ferns, and grasses in every shade of green and brown, and if the gladioli were mixed with brown leaves and set against a curtain of dusky-blue or bronze-green velvet, the result would be charming instead of hideous. Then, although the stiff and strong-coloured sweet-williams are desperately out of place in a delicate French type of room, they would be more than merely pleasing in an old-fashioned English one with wood-panelled walls and chintz hangings. Large masses of crude strong colour should never, indeed, be introduced in rooms decorated and furnished in a light and dainty style, although they may be used with good and striking effect in dark and gloomy rooms, halls, or corridors.

Effective Combinations of Cut Flowers.—Among the endless number of possible suggestions for floral combinations the following may be singled out for special mention.

Purple Spanish iris and foliage in a tall jar of shaded green pottery against very pale green walls or hangings; crimson and white peonies in a white porcelain basket against soft turquoise-blue; tiger-lilies and brown-beech sprays in a copper vase against a dusky-blue background; scarlet dahlias, carrot foliage, and brown bracken fronds in a brown pottery bowl against golden-tan; white lilac and daffodils in green glass vases against yellow; pink sweet-peas, white roses, and crimson carnations in turquoise-blue china bowls in a room furnished and decorated in Chippendale style, with a paper patterned with pink roses and blue love-knots.

Haphazard combinations, things of shreds and patches, are not to be tolerated. Scarcity is no excuse for putting two or three purple asters, a damask rose, a couple of African marigolds, and a bit of asparagus in one vase; it is infinitely better to fall back on arrangements of foliage alone, a form of floral decoration far too much neglected even by those who have an ample supply of the "raw material" at their very doors.

Receptacles for Cut Flowers.—As to receptacles, it may be taken as a general rule that they should not be so eccentric in form or elaborate in decoration as to divert attention from the flowers



Fig. 175.—Cut Flowers, &c., in various Receptacles.

to which they are mere accessories. The outline and colour should of course be good; their material is less important, although a proper sense of the fitness of things will forbid the choice of a threepenny brown earthenware jar to hold rare orchids or a Venetian goblet as



Fig. 176.—Cut Flowers in various Receptacles.

a receptacle for buttercups. Much of the prettiest English art ware and some Japanese pottery is so porous that the water oozes through it and makes a damp patch on anything the vases may be placed upon. This can be remedied by putting a small piece of wax candle in the vase, setting it in a cool oven or on the hob until the wax is melted, and then turning it

about until every part of the interior is coated with a thin but even layer of wax. This effectually cures the oozing. The process need only be repeated when it is necessary to wash the vase out with very hot water.

It is an excellent plan to have in the house a certain number of receptacles to be kept full of flowers or foliage all the year round. In a plainly-furnished hall, for instance, a common red-brown pitcher—the Devonshire shape is the most picturesque—set on an oak stool will fill a corner admirably, and its ample size and convenient shape will afford plenty of scope for the decorator's talent. In spring it may be filled with boughs of Crab-apple, wild pear, or Blackthorn, later on with great fronds of Male Fern and tall foxgloves; from September to November a brave show can be made with small branches of autumnal-tinted leaves mixed with orange-red tritomas, and when the year is still further advanced, an effective group can be made of the silvery-white Honesty pods, sprays of Cape Gooseberry and the leafless twigs covered with silvery-gray or yellow lichen which are to be found in most hedgerows. Groups of foliage alone look well in big pitchers or tall, double-handled jars; oak and fir boughs, for instance, can be effectively blended with taller branches of birch, and small boughs of ordinary garden shrubs such as euonymus, box, aucuba, holly, and privet may be used successfully, if care be taken not to mass their rather sombre foliage too closely.

Wild Flowers.—Such "common" things as thistles have great decorative possibilities, and clumps of gorse in bowls of green Farnham or Belgian pottery may be used for a window-ledge or corridor with pleasing effect. For mixing with cut flowers the foliage of the French or Globe Artichoke is valuable, as are carrot-tops when bronzed by early frosts, and the feathery asparagus. A tall palm-stand, square or round, makes a good "show-table" for cut flowers. A rather tall jar should be placed on the top, and from it long trails of some creeping plant—smilax or asparagus fern, if the arrangement is an ambitious one; bryony, hops, or wild clematis, if conceived on more modest lines—may be twined round the supports of the stand, while low bowls of flowers should occupy the lower shelves.

New Use for Pole-screens.—A novel way for utilizing one of the tall pole-screens, popular thirty or forty years ago, is to remove the actual screen itself entirely (it is generally only a Berlin wool-work atrocity), and to replace it by a hanging basket, either creel or funnel-shaped, attaching it to a screw or hook driven into the wood, and filling it with ferns, flowers, and long trails of creepers which are twisted lightly round the slender pole of the screen (fig. 177).

Cut Flowers for the Fireplace.—It is not easy to decorate a fireplace successfully with cut flowers, if anything more than the simple jar or pitcher set in front of a small screen is desired. A pretty plan, however, is to have the hearth covered with a sheet of looking-glass edged with narrow troughs, also of glass, and to place on it a trumpet-shaped clear glass vase holding a very light and graceful group of flowers, the troughs being filled with small fern fronds and flowers of dwarf habit of growth. This arrange-

ment is very pleasing, carried out with Meadow-sweet, Flowering-rush, wild forget-me-nots, aquatic grasses, and water-lilies, or with yellow-flags, reeds, and marsh marigolds, the grate opening behind the vase being concealed by a curtain of pale sea-green silk. It may be adapted for a ball-room decoration in winter time by substituting for the vase a basket of silvered rush holding frosted holly and mistletoe and scarlet Van Thol tulips, backed with a curtain of either silk or white silver-printed Japanese crape.

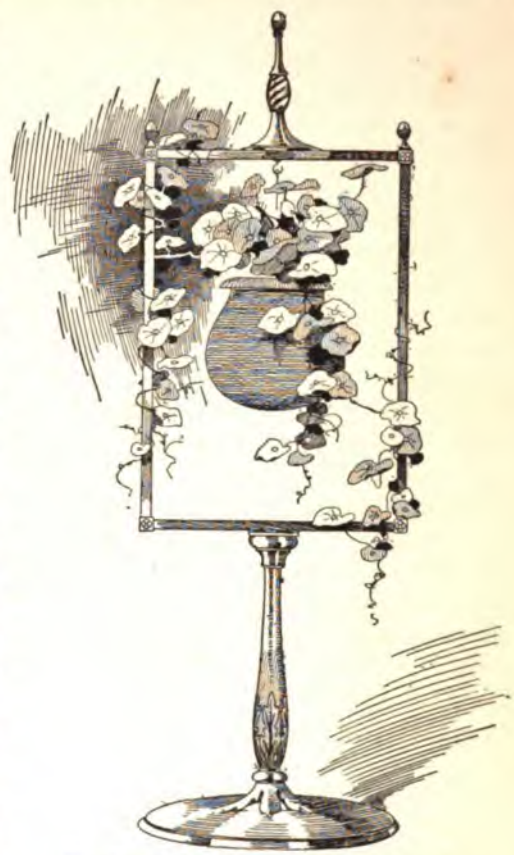


Fig. 177.—Pole Screen utilized for hanging Plant.

Cut Flowers for the Mantel-shelf.—It is not usual to decorate mantel-pieces elaborately with flowers except on the occasion of a ball or a wedding. Yet in summer time it is a pleasing custom to keep one mantel-piece at least in the house—that of the hall for choice—completely covered with blossoms and greenery. A tin or zinc tray must be fitted to the shelf to hold the necessary damp moss or sand, and this can be made high enough at the back to protect the wall-paper. If not, a piece of American cloth or oil-silk must be fastened to the wall by means of drawing-pins. The flowers and foliage should be carefully but not too formally arranged, the highest at the back and in the centre of the shelf, and graduated down to the fern-fronds and sprays of ivy, honeysuckle, Virginia-creeper, jasmine, sweet-peas, or whatever other trailing plant is chosen to hide the edge of the tin.

Flowers Grown Specially for the House.—It is, perhaps, a counsel of perfection to advise that if a garden of any size is possessed, flowers might be grown for cutting with a view to the special requirements of the various rooms in the house. Yet the suggestion could be carried out to a certain extent without difficulty. For example, if yellow and red combinations best suit the decorations of the principal rooms, then flowers of these particular hues might have extra space allotted to them, or if the drawing-room is daintily furnished in a light and fanciful style, blossoms of appropriate type, such as carnations and roses, Shirley Poppies, and all other

kinds of slim-stalked delicate-coloured flowers should be grown in abundance. When the house is large and sparsely furnished, with corridors and broad landings, free-growing, tall plants are valuable for filling up bare spaces. Giant sunflowers, hollyhocks, "red-hot pokers", and branches of flowering shrubs are of service here, and a corner in the wild garden may be devoted even to such weeds as Cow-parsnip and Hemlock for the sake of their foliage. Then, again, if the house be old-fashioned, with low-ceiled rooms and old English oak furniture, the plants grown for decorative purposes ought to be old-fashioned too, and should include all kinds of sweet-scented things: Lavender, Sweet-brier, Honeysuckle, and the Rosemary, that only flourishes "where the mistress is master too", according to an old saying. In the garden also should be planted "the wall-flower, the Stock Gilly-flower, the cowslip, Flower-de-luces, and Lilies of all Natures"—as many others indeed of the fair and fragrant blossoms whose quaint names are to be found in Bacon's "Essaye" as can be obtained.

(For "Floral Decoration of the Dinner Table", see under "Entertaining", vol. iii.)

SUGGESTED COMBINATIONS OF CUT FLOWERS.

Spring.—Solomon's Seal, mimosa, and deep yellow tulips, white lilac, and parrot tulips; purple, lilac, and Spanish iris in shades of mauve, purple, and yellow; pale pink tulips, mauve Spanish iris, and purple Russian violets; white narcissi, yellow jonquils, and sprays of laurel or bay; pale pink anemones, early blue forget-me-nots and maidenhair fern; branches of Crab-apple blossom, pink tulips, and young oak shoots.

Summer.—Scarlet gladioli, white musk-mallow, and brown beech foliage; yellow broom, purple flags (common garden iris), and fronds of Male Fern; Ragged-robin, white columbine, grasses and Lady Fern; scarlet perennial lobelias and white Paris daisies; orange perennial poppies, green wild oats and Bracken fronds; tiger-lilies and branches of beech, brown and green; white cluster-roses, scarlet geraniums, and trails of Japanese honeysuckle.

Autumn.—White lupins, scarlet cactus dahlias, bronze carrot-tops, and purple beet; pale mauve chrysanthemums or large Michaelmas Daisies and sprays of Spanish Chestnut leaves, turning from green to yellow; red-brown chrysanthemums and maple foliage; small white Michaelmas Daisies, scarlet single dahlias, and asparagus; wild cornel (dogwood), teazles, scarlet hips, and trails of Traveller's Joy; perennial sunflowers, Virginia Creeper, and sumach foliage; yellow chrysanthemums and sprays of the Snow-berry tree; torch-lilies (tritomas), large white marguerites and red and brown foliage; barberry and rowan-berry sprays, white single dahlias, carrot foliage, and hips.

Winter.—White Honesty pods and scarlet geraniums; Christmas-roses and yellow-berried holly; branches of bay, black-berried ivy, and scarlet Van Thol tulips; ferns, mistletoe, white chrysanthemums, and scarlet poinsettias.

THE GARDEN.

Preliminary Work.—When a new house has been taken, the garden is sure to require a great deal of clearing up, no matter what the season may be, for a tenant seldom takes much care of it when he intends to leave. At the same time, it is just as well not to be in too great hurry to make sweeping changes. Very often what at first sight seems a senseless block has been carefully prepared to screen an objectionable background, or to shield an exposed corner from the violence of the weather. It is always safe, however, to attend to the paths and edging, to sweep up all litter, and to make a clearance of workmen's débris.

Walks.—Nothing looks worse than untidy walks, and it is labour well repaid to weed the gravel, dig it up lightly, and roll it down again. Salt is useful, but it is apt to make the ground damp. The coarsest rock-salt is the most suitable. Weed-killers are sold, but, being poisonous, should be used with caution.

Edging.—The edgings are sure to require attention. In a well-laid-out garden they should match the general design. Box always looks best in an Elizabethan corner, while tiles are sometimes more appropriate for defining the gravel paths. In some respects box is apt to be troublesome. It needs clipping in the spring, and in some soils soon becomes ragged, while it is a veritable paradise for noxious insects and slugs. When box does not thrive, tiles should be substituted. They are easily renewed, and are not injured when any weed-killer is sprinkled on the paths. A blue Staffordshire tile forms a neat border, while many different patterns in terra-cotta can be procured at different prices. Even plain flat tiles can be used.

Laying Out.—In laying out, it is advisable to bear in mind the different points of view from which the general effect will be observed, and to try to get as pretty a view from the drawing-room window as from the front walk. Simple arches covered with creepers, such as honeysuckles, roses, clematis, or even annuals, such as canary-creepers, make effective screens to shut off the vegetable garden, and add much to the apparent size of the grounds.

Shrubberies.—Evergreen shrubs make an excellent background if they are carefully trimmed and kept within bounds. The only hope for ragged shrubs is to cut them right back to make new growth. Common laurel and laurustinus can be recommended for exposed portions, and are easily kept trimmed. Berberis, Aucuba, box, Euonymus, Rhododendron, and

holly as evergreens, and roses, Forsythia, Pyrus japonica, Syringa, lilac, and Deutzia as deciduous flowering shrubs, may be used.

Drainage.—A good many gardens are ruined by want of attention to drainage. The percolation of water through the soil regulates the supply of nourishment to the roots, a matter which is of the utmost importance. The longer the drain the larger the pipe should be, so that the draught of water may keep it clear. Drains should be laid on the subsoil with a slight fall, the depth depending on the nature of the top soil. In heavy land they should be close to the surface. Shallower light land requires no draining. It is useless to attempt to drain a damp hollow by running pipes through the centre of it; they should be placed along the slope. The proper method of laying pipes is, to put them end to end, and then to cover them with straw and twigs before the soil is returned to the trench (figs. 178 and 179). Although the work is practicable at any time, it is best done in winter, when the ground is more or less vacant. Unless the fall is very decided, however, it is far from a simple matter, and the advice of an experienced man should be obtained if possible.

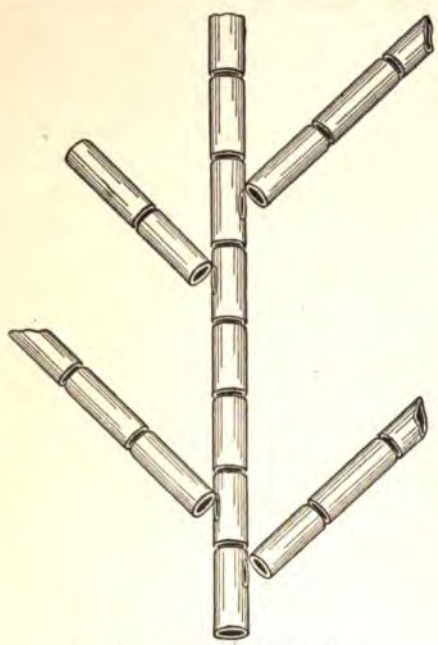


Fig. 178.—How to lay Land-drains.

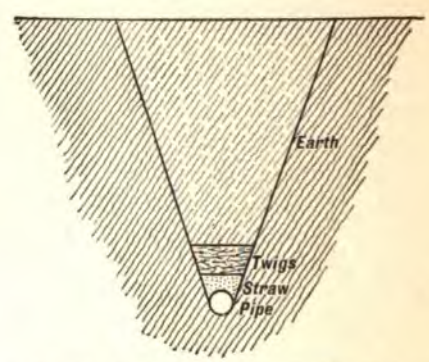


Fig. 179.—Section of Cutting for Drain refilled.

The Lawn.—The laying down of a lawn will be dealt with later, but where one already exists attention should be given to it at once if in a weak or patchy condition. Nothing but constant cutting and rolling for generations can bring turf to the velvety condition of the Oxford quadrangles, but it is wonderful how soon grass may be improved by carefully forking over the hard patches—raising them slightly without breaking the surface more than can be avoided. A bundle of sharp thorns, fastened to a hurdle and weighted, or an iron rake, should then be dragged backwards and forwards over the surface. Finally, a rich compost, well sifted, should be given as a top-dressing, 5 per cent each of lime, wood-ashes, and soot being added to the manure. Nitrate of soda and superphosphate of lime,

at the rate of two or three ounces to the square yard, may be watered in as the grass begins to push through the dressing. Both are strong stimulants. Where the lawn is coarse through neglect, all that can be done is to keep the grass very short, and to sow with the compost seeds of the finer kinds of grass.

Paring and Burning.—If weeds have overrun a plot which cannot be trenched, or if grass land is to be reclaimed, the whole of the top soil, to a depth of about two inches, should be pared off with the spade and burnt. The burnt earth and ashes form a most valuable dressing, especially for clay. Much depends upon the amount of rubbish mixed with the earth as to how it will burn, but if a good pile is collected, there should be no difficulty. Start the pile with straw or paper, and around place a circle of sticks, wigwam fashion. Over these some rubbish should be laid, and then a layer of earth, a hole being left for the admission of air. When the fire is well lighted, the hole may be closed, and the remainder of the earth clamped round, with occasional shovels of coal-dust if the quantity is large. This heap will go on smouldering for days, and when it is opened the fire will be found to have burned its way right through.

Trenching.—As regards neglected or vacant plots in the vegetable or flower garden it is an excellent plan to trench the ground deeply for the winter, leaving it in ridges in order to expose as much as possible to the weather. This helps to decompose the soil and to break it up into the constituents that form plant-food.

Seed-beds.—No time should be lost in preparing plots for seeds of the various plants that will shortly be required according to the season. The matter is dealt with under "Vegetables" and "Flowers".

Clearing and Digging.—All old crops should be cleared off and the ground roughly dug over. Digging is said to be the finest exercise for the dyspeptic that is known. The spade should be driven perpendicularly into the soil, not slantingly, and the sod should be turned right over. The proper method is to wheel away the first row of sods to the end; the second row then takes the place of the first after the operation of digging, and the first row takes the place of the last. This is the only way to keep the land level without the use of a rake.

Garden Tools.—These general remarks on the preliminary work in a garden may conclude with a list of the more useful tools and appliances, and their approximate cost.

Spade, 2*s.* 6*d.* to 3*s.* 6*d.*; fork, 2*s.* 6*d.*; rake, 1*s.*; hoe, 1*s.* (it is best to purchase handle, and several blades to fit); birch broom, 8*d.*; barrow, about 25*s.*; lawn-mower (10-inch mower), rather over £2; hedge-clippers, 3*s.* 6*d.*; syringe (good), 10*s.* 6*d.*; cans (1 gal.), 2*s.* 3*d.* or (2 gals.) 3*s.* 3*d.*; pruning-knife, 3*s.*; budding do., 2*s.* 6*d.*; trowel, 9*d.*; roller (diameter 20 inches, length 22 inches), £2, 16*s.*; thermometer (minimum), 3*s.*; ladder, 6*d.* per round up to 30.

Appliances.—Tiles are 9 inches in length, and cost from 12*s.* to 15*s.* per 100, according to design. Drain-pipes are sold to size. Galvanized arches

cost from 4*s.* 3*d.*; rustic arches from 12*s.*; nails for walls, 14*s.* per cwt.; raffia for tying, 9*d.* per lb.; cork, 14 lbs., 2*s.*; cocoa-nut fibre, 9*d.* per sack; pots (an amateur's collection of 200, various sizes), 10*s.*; bamboos (2 feet), 2*s.* per 100, or (4 feet), 3*s.*

Manures, &c.—Rotted stable manure is best for all ordinary purposes. If special manures are needed then the following may be used:—Nitrate of soda costs 15*s.* per cwt.; sulphate of ammonia, 16*s.* per cwt.; superphosphate, 6*s.* per cwt.; guano, 15*s.* 6*d.* per cwt.; salt, 2*s.* 6*d.* per cwt.; weed-killer, 1*s.* per gal., to make 25 gals.

THE VEGETABLE GARDEN.

The supply of good fresh vegetables is so important to the health of a household, that it is no wonder that the kitchen-garden holds an important place in the average householder's mind.

Undoubtedly the secret of success lies in careful cultivation and forethought. It is of no use to leave the vegetable garden to the last minute, and then rush in a large number of crops. The result would probably be miserably poor, and most of the plants would come to maturity at the same time, go off together, and leave the kitchen unsupplied till a second crop could mature.

Succession of Vegetables.—What should rather be aimed at, however small the available space, is to procure a regular succession all the year round, and the table on the next page shows how this may be done.

Cropping.—For all these vegetables less space is required than is often supposed. Two or three crops may be grown on the same plot in the year, sometimes even two concurrently. For instance, when the earliest potatoes, planted in February, are lifted in June, the lettuces sown in the seed-bed in April or May will be ready for transplanting to the cleared ground, and when they are cut in August, savoys can be planted in their stead. Again, the main crop of potatoes is lifted in September, but there is no reason why a green crop of sprouts and cauliflowers should not be dibbled between the rows in July and August. The potato haulms will shade the young plants from the fierce sun; and if the work is carefully performed the removal of the tubers will not injure them.

Culture.—The great thing is to keep the soil always clean and in good heart. Weeds take as much from the ground as a crop, and must be kept down; but even if the hoeing is well done it is only natural that constant and heavy cropping must exhaust the fertility of the land, so that it is of the utmost importance to pay attention to cultural operations and manuring. By cultural operations is meant the thorough deep digging of the soil between the crops. The spade or fork must reach the hard-capped surface below the top soil and break it up. Trenching and rough digging in the autumn is of the greatest value, because of the action of frost in freeing

the constituents of the soil, thorough pulverization being as valuable as a coat of manure. Nothing can be grown properly in clods; the fine roots have no chance. Frost alone will crush the clods.

TABLE OF VEGETABLE CROPS (OUTDOORS).

MONTH.	TO SOW.	TO PLANT OUT.	VEGETABLES READY FOR TABLE.
January	Peas, Spinach	...	Cabbage, Celery, Endive, Savoy, Sprouts, Turnips
February	Broad Beans, Cabbage, *Celery*, Lettuce, Peas	...	Cabbage, Cauliflower, Endive, Savoy, Turnips
March	Broad Beans, Broccoli, Cabbage, *Celery*, *Cauliflower*, Lettuce, *Marrow*, Onions, Peas, Potatoes, Radishes, Spinach, Sprouts, *Tomatoes*, Turnips	Lettuce	Cabbage, Cauliflower, Endive, Lettuce, Savoy, Turnips
April	Broad Beans, Beans (French), Beans (Scarlet Runners), Broccoli, Cabbage, Carrots, *Cauliflower*, Lettuce, *Marrow*, Onions, Peas, Potatoes, Radishes, Spinach, Sprouts, Turnips	Cabbage, Lettuce, Sprouts	Cabbage, Cauliflowers, Lettuce
May	Broad Beans, Beans (French), Beans (Scarlet Runners), Beet, Broccoli, *Cauliflower*, *Cucumber*, Lettuce, *Marrow*, Peas, Potatoes, Radishes, Turnips	Cabbage, Celery, Lettuce, Marrow, Sprouts	Cabbage, Lettuce, Radishes
June	Beans (French), Cabbage, Endive, Lettuce, Radishes, Savoy, Turnips	Cabbage, Cauliflower, Cucumber, Lettuce, Marrow, Sprouts, Tomatoes	Broad Beans, Lettuces, Peas, Potatoes (earliest), Radishes
July	Cabbage, Endive, Lettuce, Radishes, Savoy, Spinach, Turnips	Cauliflower, Lettuce, Marrow, Sprouts	Beans (all sorts), Broccoli, Lettuce, Marrow, Peas, Potatoes (come in and continue), Radishes
August	Cabbage, Cauliflower, Endive, Lettuce Onions	Cabbage, Cauliflower, Lettuce	Beans (all sorts), Broccoli, Carrots, Cucumber, Lettuce, Marrow, Onions, Peas, Radishes, Spinach, Tomatoes, Turnips
September	...	Cabbage, Lettuce, Savoy	Beans (French), Beet, Broccoli, Cabbage, Carrots, Celery, Cucumber, Lettuce, Marrow, Peas, Radishes, Spinach, Tomatoes, Turnips
October	...	Cabbage, Cauliflower, Savoy	Beans (French), Beet, Broccoli, Cabbage, Carrots, Celery, Cucumber, Lettuce, Marrow, Spinach, Tomatoes, Turnips
November	...		Beet, Cabbage, Cauliflower, Celery, Endive, Sprouts, Turnips
December	...	...	Cabbage, Cauliflower, Celery, Endive, Sprouts, Turnips

Note.—When the name is printed in italics, the seeds should be sown in heat.

Manuring.—It is important to remember that manure has a less enduring effect on light than on heavy land, for the simple reason that it soaks away sooner. Moreover, as no plant likes to come into direct contact with hot raw manure, the heaps must be allowed to decay before being put on the land. Nevertheless, it is not well to allow decomposition to go too far; firstly, because much valuable matter evaporates into the air in the process; and secondly, because, on heavy land especially, the longer straw tends to keep the soil open and prevents its getting "clung". Celery trenches are an excellent medium for manuring the land; and where much celery is grown, if the trenches are well manured and the roots earthed up for winter, there is sure to be a good crop the following year.

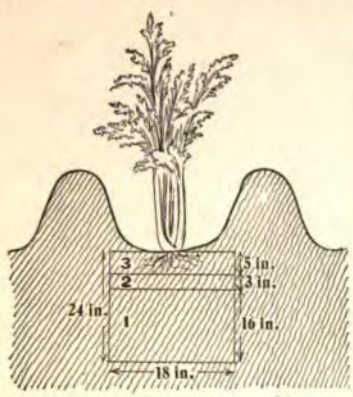


Fig. 180.—Celery Trench. 1, Manure; 2, Leaf-mould; 3, Ordinary Soil.

Artificial manures are useful, but should be used sparingly. They are excellent for ridding the ground of many injurious insects, which farmyard manure has a tendency to encourage. Nitrate of soda is to be recommended for any green foliage crop, while for leguminous plants, such as peas or beans, the object should be to supply phosphates, as such plants obtain their nitrogen from the air.

SOME GOOD VARIETIES OF VEGETABLES.

	Early.	Main Crop.	Late.
Broad Beans	Early Long-Pod	Green Windsor	...
French Beans	Early Long-podded Negro	Canadian Wonder	...
Cabbage	Ellam's Early Dwarf	Drumhead	Enfield Market
Carrot	Early Scarlet Horn	James's Scarlet Intermediate	...
Lettuce	Brown Bath (autumn sown)	Drumhead	...
Onion	Bedfordshire Champion (spring)	James's Keeping	...
	Giant Rocca Tripoli (autumn sown)	...	...
Peas	Kentish Invicta	Dr. Maclean	Walker's Perpetual
	American Wonder	Telephone	
Potatoes	Early Rose	Beauty of Hebron	Schoolmaster
	Ashleaf	Magnum Bonum	White Elephant
Tomatoes	Trophy	Conference	...

Hints on Vegetable Culture.—Naturally, different kinds of vegetables require different treatment. For the benefit of the amateur gardener, a few hints are given on the special culture of each.

Beans, Broad.—Beans do well on most soils. Sow in rows 3 inches between the plants, and 2 feet between rows. Nip off the tops when the flowers begin to fall.

Beans, French.—Sow French beans in rows 2 feet apart and 6 inches between the seeds. Thin if necessary.

Beans, Runner.—For runner beans sticks or trellis-work are required. They form an excellent blind to cover unsightly spots. The rows should be 6 feet apart.

Beet.—Sow in drills 1½ foot apart. Thin the young plants out to not less than 9 inches apart. Take up in November and put into a clamp.

Broccoli, Cabbage, &c.—Sow in boxes or on seed-bed. Thin the young plants early, and transplant when ready for their final move. Plant out from 1½ to 2 feet apart each way.

Carrots.—Thin early, and pay special attention to weeding. The finest carrots are grown where the most attention has been paid to getting the soil fine. The drills should be about 1 foot apart, and the seed scarcely covered (see fig. 181).

Cauliflowers.—Raise in gentle heat. The late sowing in August is only recommended to those who can protect in winter.

Celery.—Raise in gentle heat. Prick out in rich soil in boxes, and finally transplant to well-manured trenches. Give plenty of water, and earth up to blanch.

Cucumber.—Raise in heat. Plant in warm bed of manure, covered with soil. Give plenty of water.

Endive.—Thin out when grown to a foot apart, and cover with inverted pots to bleach.

Lettuces.—Transplant from the seed-bed to 9 inches apart each way. Never allow them to go to seed, as they spoil the ground. Quick growth is essential; therefore they should have rich soil, plenty of water, and a sunny situation. After May the seeds should be sown as recommended for carrots, and the plants thinned.

Marrows.—An old manure-heap or rubbish-corner in the sun, where there is plenty of rich, decayed vegetation, suits this plant. Give plenty of water in hot weather.

Onions.—A good seed-bed is essential. The soil should be well manured, fine but firm. Sow in rows 8 inches apart, and thin out to 4 inches.

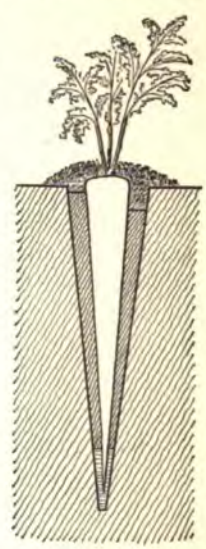


Fig. 181.—Section, showing method of growing Parsnips and Carrots in Heavy Ground.

Peas.—Rich soil suits peas well. Dwarf varieties need no sticks. Early peas are much attacked by birds, and need protection. Dress the seeds with red-lead before sowing, if mice are troublesome. Sow in rows 4 feet apart, and occupy intervening space with spinach, lettuces, or radishes.

Potatoes.—Plant the "sets" a foot apart, with 2 feet between the rows. Two or three eyes on each tuber are more likely to produce a good crop than a whole potato with many eyes. Potatoes need to have the earth drawn round them with the hoe when the young tubers begin to form.

Radishes.—Sow in rich ground and give plenty of water.

Spinach.—Sow in drills 1 inch deep and 1 foot apart. Cut when ready, and leave bases for second and even third crops.

Tomatoes.—Tomatoes may be successfully grown out of doors. The culture is similar to that of those grown under glass, described later, except that the young plants need gradual hardening off before being transplanted. If the soil is good no further manure will be needed. Pinch out all laterals, and, when the plants have made three bunches of bloom on a single stalk, stop the main stem. Remove only such leaves as shade the fruit that is beginning to change colour, and continue to pick off all lateral shoots. Tomatoes should be supported by being carefully, but not tightly, tied to firm sticks.

Turnips.—Dress with soot, and water freely in hot weather to keep off the fly. Thin out to a distance of 8 inches.

Asparagus Culture.—Of the vegetables which occupy the same ground year after year, asparagus is the most important. To grow it well, the land must be thoroughly cleaned and manured richly. If the soil is heavy, it is wise to raise the beds, which should be 5 feet wide, with intervals of 3 feet between. Three-year-old plants are the best. They should be procured from some nurseryman—in the neighbourhood, if possible, for if left long out of the ground they are apt to die. Put three rows on each bed, the outside rows at a distance of 18 inches from the centre. Plant in March at a depth of 3 inches and water freely. Mulch heavily with manure every spring, and the bed will produce well for many years. It is not advisable, however, to cut the first year after planting. Dress the beds every February with salt.

Sea-kale.—April is the month for making up a sea-kale bed. Rooting plants should be set in threes, 6 inches apart, and a yard between each group. Pots should be placed over these crowns, and manure or decaying vegetation stacked round to force the shoots. Unless they are kept in complete darkness, they will not be properly bleached.

Rhubarb.—Rhubarb should be treated in much the same way as sea-kale.



Fig. 182.—Section of Forcing-tub with Manure

About March outdoor uncovered rhubarb may be mulched, and afterwards heavily watered with liquid manure to force the growth. Early rhubarb is obtained by manuring the plants in the previous summer, and about January

placing barrels or pots over the crowns, and stacking hot manure round the outside. Under glass the earliest rhubarb is easily forced over the pipes.

THE FRUIT-GARDEN.

If properly managed, fruit should be available all the year round. With care in gathering and storing, it is comparatively easy to keep up a supply of apples and pears till the end of March. April and May are two difficult months to provide for, and during that period the ordinary amateur must not expect to have much besides rhubarb and green fruits. June brings with it strawberries and cherries, and from that time onward there should be no lack of fruit till after Christmas.

Proper Succession of Fruit.—For a proper succession, early, main crop, and late varieties should be grown. By means of south and north walls, the fruiting of early and late sorts can be prolonged further. For instance, red currants, if trained on a north wall and protected by nets from the birds, ripen later and hang some weeks longer than those grown in the open. On the other hand, in warm sunny ground under a south wall, strawberries will be ripe in May, while later varieties on the north side may be kept back till late in July. In the same way it is possible to gather raspberries continuously from July to the end of September. The following table will show when the different fruits should be procurable if a proper method of succession be carried out.

TABLE OF SEASONABLE FRUITS.

(Each month during which a fruit is in season is marked with a ×.)

Fruit.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Apples	×	×	×	×	...	...	...	×	×	×	×	×
Apricots	...	...	...	...	...	...	...	×	×	...	...	...
Blackberries	...	...	...	...	...	...	...	...	×	×	...	...
Bullaces	...	...	...	...	...	...	...	...	...	×	×	×
Cherries	...	...	...	...	...	×	×	×	×	...	...	...
Currants (Black)	...	...	...	...	...	...	×	×	...	...	...	...
Currants (Red)	...	...	...	...	...	...	×	×	×	...	...	...
Currants (White)	...	...	...	...	...	...	...	×	×	...	...	...
Damsons	...	...	...	...	...	...	...	...	×	×	...	...
Figs	...	...	...	...	...	...	×	×	×	...	...	...
Filberts	×	...	...	...	...	...	...	...	...	×	×	×
Gooseberries	...	...	...	...	×	×	×	×	...	...	...	...
Grapes (outdoor)	...	...	...	...	...	...	...	...	×	×	×	...
Grapes (indoor)	×	...	...	...	...	...	...	×	×	×	×	×
Greengages	...	...	...	...	...	...	×	×	...	...	...	...
Nectarines	...	...	...	...	...	...	×	×	...	...	..	...
Peaches	...	...	...	...	...	...	...	...	×	×	...	...
Pears	×	×	×	×	...	...	...	×	×	×	×	×
Plums	...	...	...	...	...	...	...	×	×	×	...	...
Raspberries	...	...	...	...	...	...	×	×	×	...	...	...
Strawberries	...	...	...	...	×	×	×	...	...	...	...	...

Planting Fruit-trees.—As fruit-trees do not begin to bear until they are three or four years old, it is far better to purchase than to attempt to raise them. The old-fashioned method of making an orchard was to dig a number of holes, fill them with rich earth, and plant the young trees in them. Such a method is radically wrong for many reasons. The water draining into these holes from the surrounding ground soon makes the earth in them sodden; the roots spread downwards instead of keeping near the surface; and the added manurial soil generally becomes sour before the rootlets can pass through it. The following system is more rational. The ground should be trenched to a depth of 2 feet, and well manured, the trees planted so that surface-rooting is encouraged. The illustration shows how trees are sometimes planted with a slate under the roots to force them into a lateral rather than a vertical direction, so that they may find the richest food. This is done only when the soil is deep. During frost it is customary in some nurseries to dip the roots into a thick clayey mixture so that the fine fibres may be protected by a thin coating of mud. In such cases the roots should be well soaked in water before being planted. Prune away broken fragments, and arrange the root horizontally and regularly. Press the earth firmly about the tree, and mulch the surface with manure as a protection against frost and drought. Every tree should be carefully staked to keep it upright and firm until well rooted. November, if the weather is open, is the best month for planting.

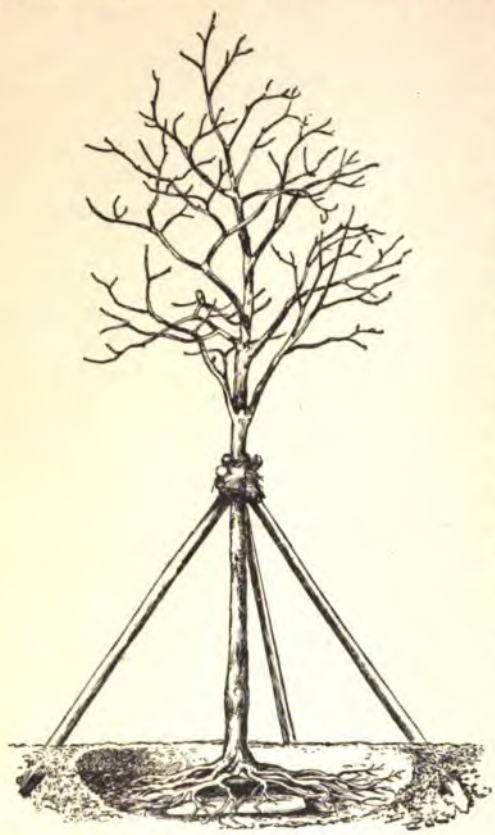
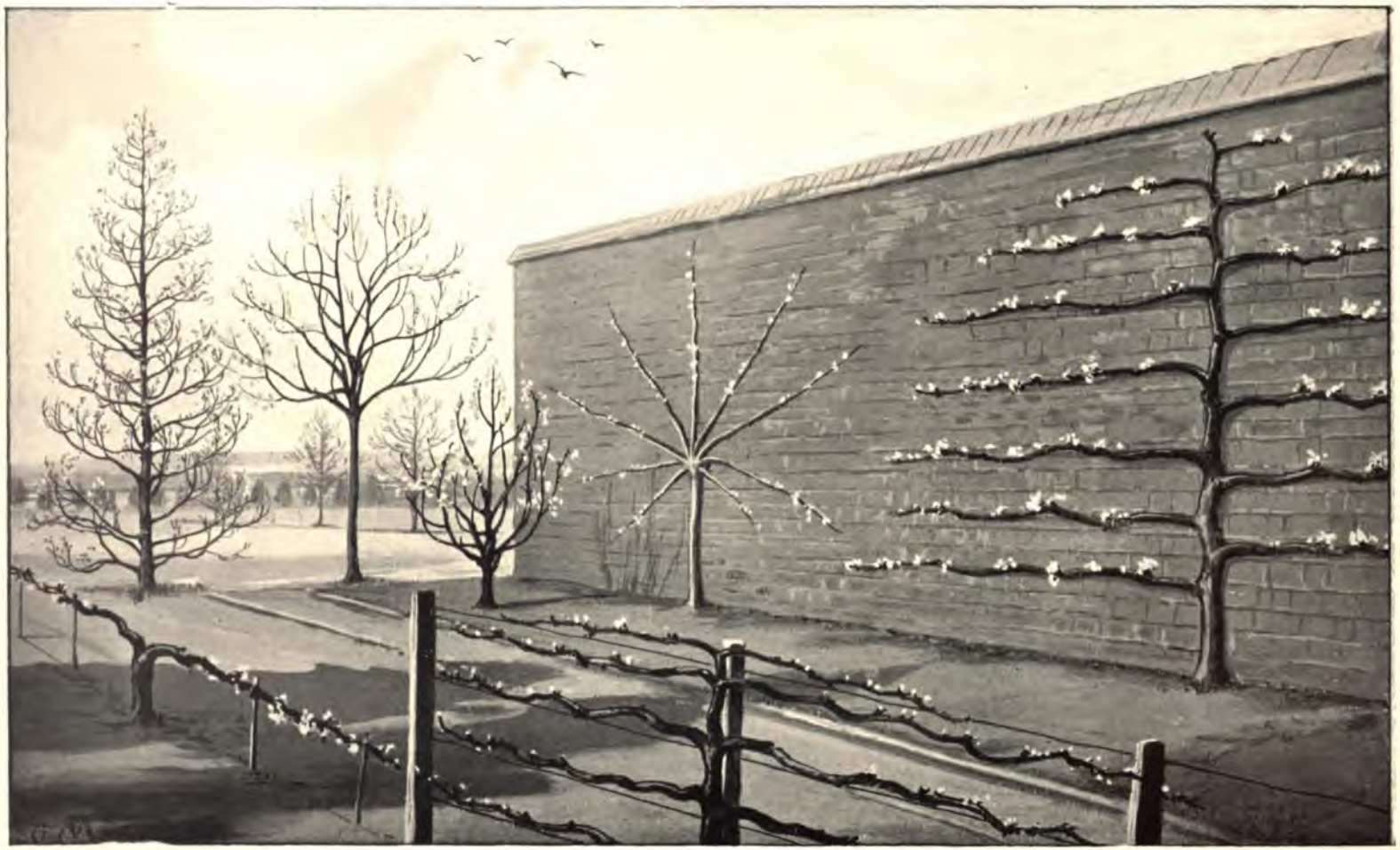


Fig. 183.—Method of Planting Fruit-tree.

Mulching.—Mulching is so important that it deserves special attention. All kinds of trees and plants are the better for it. Rotten manure, straw, litter, leaves, or any similar substance will answer the purpose, and should be spread on the surface under which the rootlets are running in spring. All water and dressing are then applied through the mulch.

Pruning.—When a young tree is established it usually requires occasional pruning. Every summer it forms leaf-shoots and fruit-spurs; the

Pyramid Standard. Dwarf Cherry. Wall Tree, fan-trained.



Cordon. Espalier. Pear-Tree, horizontally trained.

METHODS OF TRAINING FRUIT-TREES

object of pruning is to encourage the formation of the latter, and to ensure a proper shape. The method adopted depends upon the object aimed at—whether the tree is a standard, a cordon, or an espalier. Orchard trees require little or no pruning. (See Plate XVI.)

Currant-bushes require pruning in September. The red and white currants should have the leading shoot on each stem cut back to a length of 6 inches, all the side shoots being shortened to 2 inches. All shoots from the root or suckers should be removed at the same time, unless it is desired to leave one or two to replace worn-out stems. Fruit-trees, and especially currants, should be kept well open in the centre, so that the air can circulate among the branches. The black currants fruit on the wood made the previous year, so that pruning in their case should be confined to thinning the shoots and shaping the bush. Gooseberries require the same treatment as black-currants.



Fig. 184.—Well-shaped pruned Red-Currant Bush.

Training Fruit-trees.—The principal methods adopted for wall-fruit trees are the fan, horizontal, oblique, and cordon; in open ground, espaliers, pyramids, bushes, and standards are the shapes usually grown. At one time it was the fashion to grow large standard trees, but, except for orchards, bush or dwarf trees (fig. 191) now find favour. They are especially suitable for an amateur's garden, as a heavy crop is more speedily obtained and the trees are neat and compact, besides which they can be set so much more closely, a greater variety being thus grown on the same area. Fan training, horizontal training, and oblique training are illustrated and described in figs. 185–188. Fan training, or some modification of it, is generally adopted for stone-fruits, such as the peach, apricot, cherry, and plum. Horizontal training is largely employed for pear-trees and sometimes for apples, both on walls and espaliers. Fig. 187 shows this method of training as applied to espaliers, which are most to be recommended for dividing one section of the garden from another. The pruning is the same as that recommended for other kinds, except that the leading shoots are allowed to run as far as may be required and are then stopped. Oblique training is suited for weak-growing varieties. Cordons are grown on single stems, which may be either upright, horizontal, or oblique, as illustrated in fig. 190. Each shoot is allowed to make only

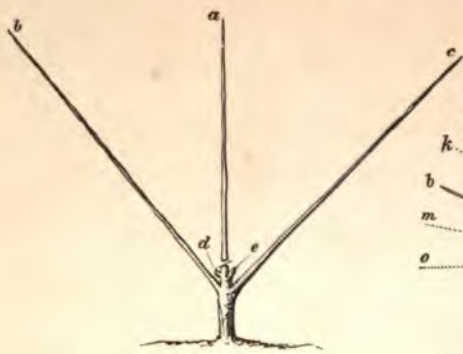


Fig. 185.

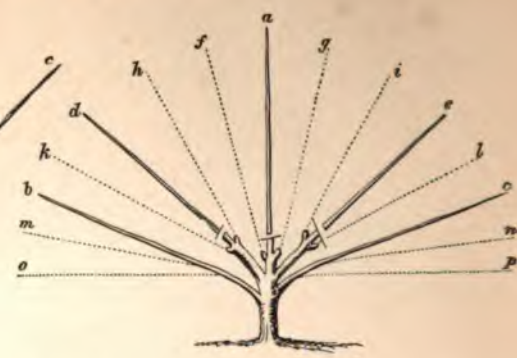


Fig. 186.

Fan Training.

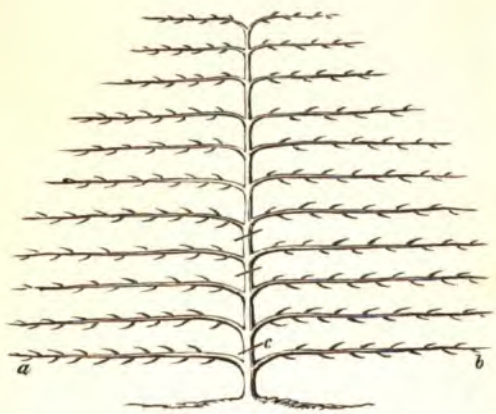


Fig. 187.—Horizontal Training.

Fan Training.—This mode of training may be started as in Fig. 185, where the tree is supposed to have made its first three shoots. At the winter pruning, *a* is cut over above three suitably situated buds, one to form a new upright leader, the others, *d* and *e*, to give rise to two side branches at a later stage (Fig. 186). *b* and *c* are lowered, their place being occupied by the two new shoots from *d* and *e*. These in turn are shortened above buds which give rise to the branches *k*, *l*, *h*, and *i*; while the leader, cut back at the same time, produces from the buds below the section two shoots, *f* and *g*.

Horizontal Training.—Fig. 187. When the young plant consists of a single upright shoot or stem, it is cut down, as at *c*, above three buds, situated at the proper height for originating the two lower horizontal branches, *a*, *b*, and the third one for the upright leader. The branches *a*, *b*, are first trained at some elevation, in order to promote free flow of sap, but are afterwards bent down. At the next winter pruning the distance between the courses of horizontal branches being determined, two buds, one on each side, a little below that distance, are selected, and at one bud above these the upright shoot is cut over. These three buds give rise to a second pair of horizontals and an upright stem. By a similar mode of proceeding all the horizontal branches are successively originated.

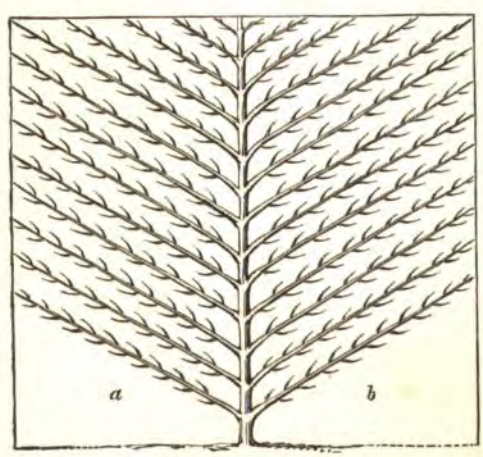


Fig. 188.—Oblique Training.

Oblique Training (Fig. 188) is similar to horizontal training, the only difference being that the branches are made to start upwards.

fruit-spurs, and the trees should be pruned at least twice in the year. In July the shoots should be shortened and thinned, and in the autumn

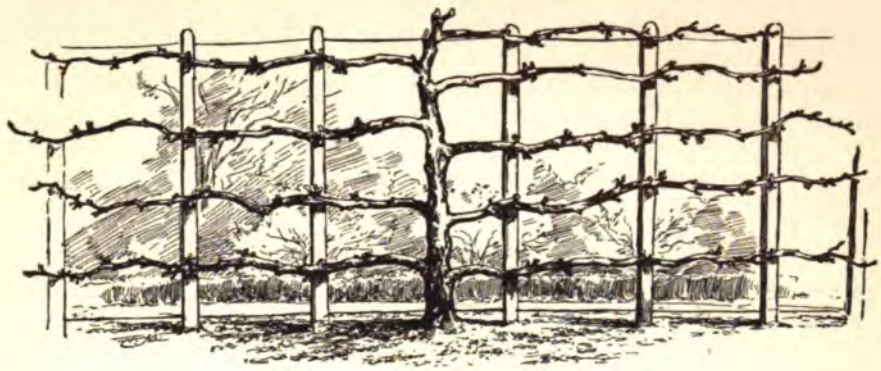


Fig. 189.—Fruit-tree trained as an Espalier.

cut back to a bud pointing in the direction that the next shoot is desired to take. Pyramid trees (Plate XVI.) are familiar in most gardens. As the

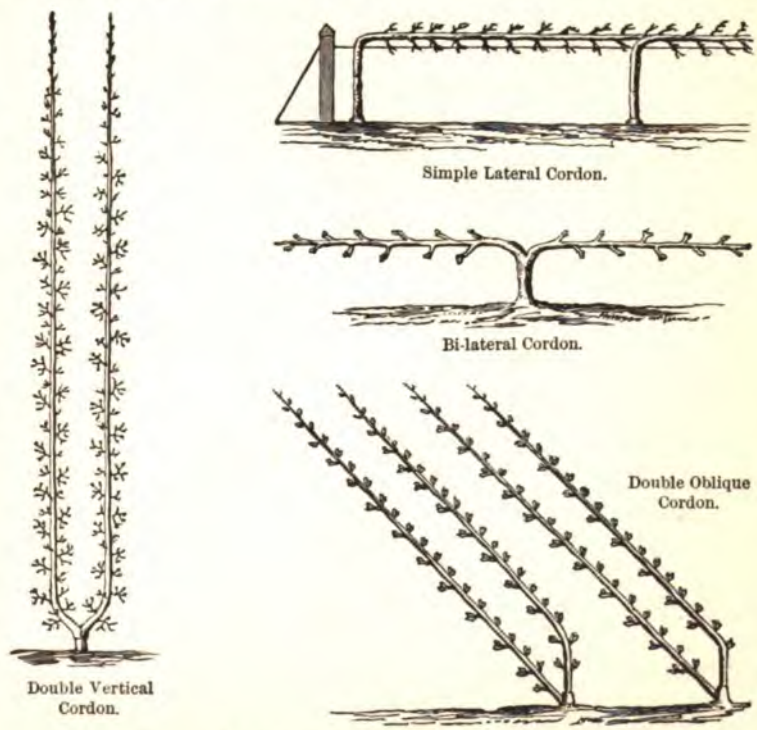


Fig. 190.—Methods of training Cordons.

name implies, they are pyramid-shaped, or rather, cone-shaped. In pruning, the aim should be to keep the tree well balanced and open. If the growth

is unduly woody this should be checked by root-pruning. Severe pruning of the shoots only increases the evil; a check to the growth is necessary if short fruit-bearing shoots are wanted. For ordinary purposes the bush or pyramid form is most convenient, and far less difficult to manage than the more highly-trained forms.

Stocks for Fruit-trees.—The stock is the plant on which the fruit is budded or grafted. In selecting trees, care should be taken to obtain apples on the paradise stock (fig. 191), pears on quince, cherries on mahaleb.



Fig. 191.—Dwarf Tree on Paradise Stock.

Root-pruning.—Surface-rooting being essential to fruit, old trees and also young trees growing too vigorously to wood are often improved by root-pruning. To perform this operation, at a distance of four feet from the bole dig round and under one half of the tree, severing all roots. Replace the old soil with a fairly rich compost for the new roots to run into, and treat the other side of the tree in the same way in the following year. Root-pruning should be done in winter, but not in frosty weather.

Budding and Grafting.—For those who prefer to raise their own fruit-trees a few brief directions as to the methods of budding and grafting are given. Old trees, by means of grafting, can be made to bear good fruit, and where space is limited and trees already exist several kinds can be budded on one stock. Budding is performed in July, preferably in showery weather. It consists in taking a bud from a good tree and uniting it to a stock grown for the purpose (fig. 192). Select a bud on the year's shoot, about the middle of the shoot. Cut it out with a portion of bark. With the reverse end of the budding-knife separate the bark from the wood, and the bud is ready. Cut across the stock transversely and laterally,

forming a T-shaped cut. Raise the bark with the haft of the knife, slip the bud under the bark, and bind firmly with matting. The more quickly the operation is done the more likely it is to succeed. As soon as the bud makes a shoot four inches long, cut back the original stock to the point at which it was budded.



Fig. 192.—Shield-budding or T-budding. A, Stock with T-shaped cut, $a\,b$; B, Bud ready for insertion.

Grafting is done when the sap begins to run in the spring, and is especially useful where budding has failed. There are several methods, but it will suffice to explain one, the simplest—cleft-grafting (fig. 193). Select a shoot of well-ripened wood, cut it off with a sharp knife, and shave the cut end like a wedge, leaving the bark down the outer edge. Cut across the top of the stock and slit down. In the slit insert the wedge so that the bark of both stock and scion correspond and fit. Bind firmly, make a pear-shaped ball of clay, similar to a plumber's join, outside the juncture, and cover with a piece of cloth, which must be kept damp. Do not remove the binding till the shoot is four months old, otherwise it may be blown out. Instead of the clay, it is better to use a mixture composed of resin 1 lb., and bees'-wax 1 lb., with sufficient lard or tallow to soften it so that it can be readily moulded with the hand.

This method serves when the operation is performed upon old trees with thick branches. When the stock is young, with a stem no thicker than the scion (graft) to be used, side-grafting is preferable. The stock is sliced diagonally, and the scion cut in the same manner, so that the two fit perfectly, at least on one side, bark to bark. They are then bound firmly with matting or grafting cotton, and clayed over as recommended for wedge-grafting.

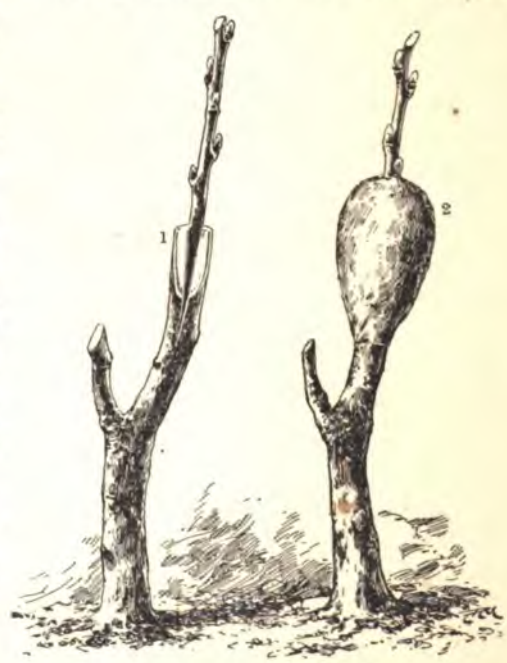


Fig. 193.—Cleft-grafting. 1, Scion inserted in Stock; 2, the joint covered over with resinous mixture or grafting clay.

Strawberry Culture.—Strawberries do best in a nice warm situation with a strong soil; if a succession be desired, the early varieties should be planted in a warm corner under a south wall, and the later kinds in a more exposed position. As soon as the plants have fruited, the runners,

if not wanted for propagation, should be cut off, and the crowns encouraged to ripen. Strawberries should be heavily mulched in the spring, and in dry weather they are the better for plenty of stimulant mixed with the water. When the fruit begins to form, clean straw should be laid over the manure in order to protect the berries from dirt and splashing. When making a selection for a new bed, always take the first runner and the little plant nearest the parent. If these plants are carefully dug up with a trowel, and planted in rows in August, they should produce fruit the following year. The best strawberries are grown on plants from one to two years old. After the third year they should be replaced with young plants.

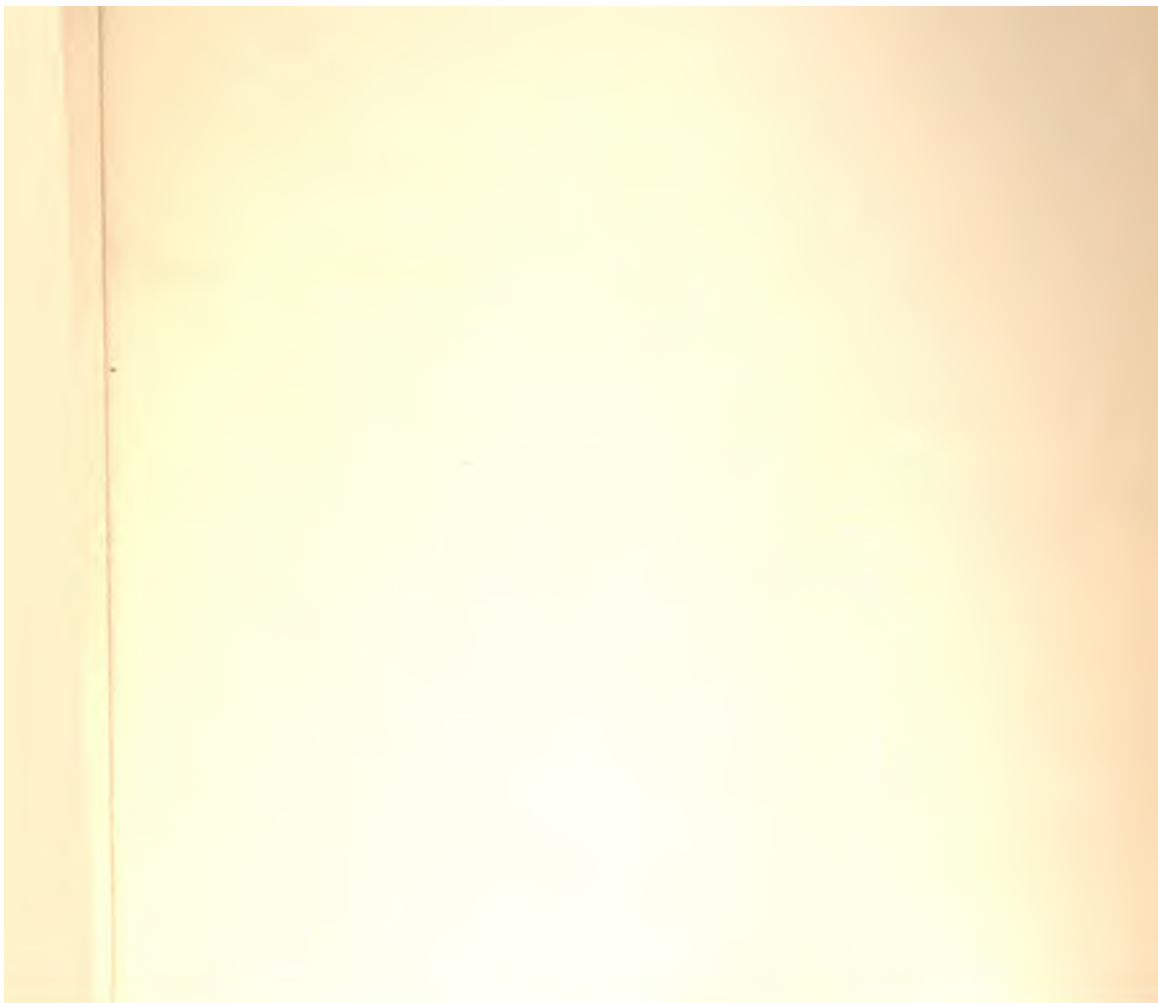
GOOD VARIETIES OF FRUIT.

	Early.	Main.	Late.
Apples, Dessert	Duchess of Oldenburg Mr. Gladstone Irish Peach	Cox's Orange Pippin Kerry Pippin King of the Pippins	Lord Burghly Sturmer Pippin Golden Harvey
Apples, Culinary	Ecklinville Seedling Pott's Seedling Keswick Codlin	Blenheim Orange Stirling Castle	Wellington New Northern Greening Bramley's Seedling Lane's Prince Albert
Cherries	May Duke Early Rivers	Black Heart Kentish Red Elton	Morello
Currants (Red)	Red Dutch La Fertile	Raby Castle La Versaillaise	
Currants (Black)	Black Naples	Lee's Prolific	Black Grape
Currants (White)	...	White Dutch	...
Gooseberries	Early Sulphur Keepsake Crown Bob	Warrington Keep-this Pitmaston Gage Whitesmith	
Nectarines	Lord Napier	Pine Apple Newton	Victoria
Peaches	Early Beatrice Dr. Hogg	Grosse Mignonne Walburton Admirable	October
Pears	William's Bon Chrétien Jargonelle Fondante d'Automne Beurré d'Amanlis	Doyenne du Comice Durondeau Marie Louise Glou Morceau	Catillac Winter Nelis Easter Beurré
Plums	Rivers Early Prolific Early Orleans	Victoria Coe's Golden Drop Jefferson's Greengage	Monarch
Raspberries	Carter's Prolific Prince of Wales	Yellow Antwerp Superlative	October Red October Yellow
Strawberries	Black Prince Keen's Seedling Royal Sovereign President	Elton Pine Sir Joseph Paxton British Queen Dr. Hogg	Lord Napier Waterloo Latest of All Loxford Hall Seedling



GARDEN FLOWERS — SOME FAVOURITE ANNUALS.

1, Dwarf Nasturtium; 2, White and Blue Larkspur; 3, Mignonette; 4, Monkshood; 5, Candytuft; 6, Corn-flower; 7, Virginia Stock; 8, Godetias.



THE FLOWER-GARDEN.

However difficult it may be to obtain a regular succession of fruit and vegetables, there is no reason why anyone with a little space should not have flowers all the year round. There are abundant kinds to choose from, and some for every month in the year.

The flower borders and front portion of shrubberies should be planted with hardy perennials, such as anemones, sunflowers, phloxes, chrysanthemums, Michaelmas daisies, peonies, penstemons, and œnotheras. These are easily established and almost take care of themselves. They yield abundance of flowers all through the summer. For ribbon borders and beds in the lawn what are known as bedding plants, *i.e.* geraniums, heliotropes, lobelias, and calceolarias, are suitable. They may be replaced in autumn with bulbs, such as hyacinths, tulips, daffodils, and crocuses, to flower in spring. By the use of such plants the garden is seldom without attraction. A judicious blending of the "bedding" plants with herbaceous perennials and annuals is by far the best way to make a flower-garden picturesque and interesting.

Bedding Plants.—These are planted in May or June. They are easily obtained at a cheap rate from nurserymen, or, if a greenhouse is available, they may be grown on from cuttings struck the previous autumn, and kept in a little warmth. They will be more appropriately dealt with later under "The Greenhouse". For bedding purposes, great numbers of annuals are also used. The seeds are very cheap, and with a frame it is easy to get the young plants ready early in the season.

Half-hardy Annuals.—The end of February is the time for making up the forcing-bed. About the third week in March it should be ready for the pans and boxes of seeds. Sowings should be made of petunias, verbenas, lobelias, *Phlox Drummondii*, stocks, zinnias, Indian pinks, asters, balsams, and ageratums. The list may be extended, but those named are all worth growing. Use light soil in the pans, and scatter the seeds on its surface, finally covering very thinly with mould. The pans and pots are better protected with pieces of glass, and shaded till the seeds germinate. It is a great mistake to have too fierce a heat below. As soon as the seedlings appear, the shade should first be removed and then the glass. When the plants are established, but before they begin to grow spindly, they should be removed to a cool house and placed on a shelf near the glass. Keep them well supplied with water during this period. Before the seedlings are planted out, they should be gradually hardened by being exposed in the open air.

Hardy Annuals.—The usual way of sowing hardy annuals is to put in the seeds about April, the result being that the flowers all bloom together and fade together. It is better to make successive sowings, the first in September for blooming the following May, again in March for July, and so on till June for display in October. There are so many kinds that it

would be impossible to mention all, but here is a good selection:—Nemophila (blue), sweet alyssum (white), candytuft (white and crimson), dwarf nasturtium (scarlet), *Limnanthes Douglasii* (yellow and white), and forget-me-not (blue). These are about 6 inches in height. Godetias (white and scarlet), mignonette, calendula (orange), and Virginian stock (red and white) run to a foot, and viscaria, catchfly (blue), cockscomb (crimson), larkspur (various), from 1 to 2 ft. Love-lies-bleeding (crimson), cornflower (blue), lupin (blue and white), sweet-pea (various), and coreopsis (yellow) are all taller, from 3 to 4 feet. They should be sown very thinly where they are to grow, the shorter varieties in front and the others behind.

Biennials.—Among biennials, plants that are sown one year to flower the next, may be mentioned:—Canterbury bells (blue and white), 3 ft.; hollyhocks (various), 9 ft.; sweet-williams (crimson and white), 2 ft.; wallflowers (brown and yellow), 2 ft.; dianthus (various), 1 ft.; and foxgloves (various), 4 ft.

Perennials.—Of perennials the number is almost infinite. But every garden should contain the following, in addition to those already mentioned:—Monk's-hood (blue), 5 ft.; auriculas (dark crimson), 6 in.; campanulas (blue), 4 ft.; carnations (various), 3 ft.; columbines (various), 2 ft.; lily of the valley (white), 6 in.; gentians (blue), 6 in.; polyanthus (brown and yellow), 6 in.; pansies (various), 6 in.; iris (white, blue, and yellow), 2 ft.; gypsophila (lilac), 2 ft.; cuckoo-flowers (scarlet), 3 ft.; dragon's-head (blue and red), 1 ft.; hellebores and Christmas-rose, 2 ft.; irises, 3 ft.; everlasting peas (pink), 4 to 5 ft.; snap-dragons (crimson and yellow), 5 ft.

Annual Climbers.—There are several useful annuals for training over trellis-work or arches. They include—Nasturtium (scarlet and yellow), Canary-creeper (yellow), *Convolvulus major* (various), sweet-peas.

The Growing of Flowers.—It is a good plan to cultivate at first only a few of the better-known sorts. Of course, the most important point to remember is the height of each plant. If the bed can be approached only from one side, the flowers should be ranged from the dwarfs on the edge to lofty dahlias or hollyhocks at the back; if it is a small circular bed, or one with paths all round, the tallest flowers should be in the centre. The second point requiring attention is colour. It is a mistake to mass too many colours at once; striking contrasts between two or three colours only are far more effective, except in very large beds. Small beds of one particular kind, in odd corners, are often charming. For instance, a little round or star-shaped bed of dark-scarlet geraniums on either side of an oblong of marguerites bordered with mignonette, is an exceedingly attractive contrast, and serves to heighten the special beauty of each flower individually. A bed of dianthus bordered by nemophila is another effective combination, while such flowers as petunias and verbenas, in all their varied colourings, are seen to much greater advantage if massed in beds by themselves than if mingled with other flowers. For a large bed, one might suggest the following scheme, working from the back to the border:—1, hollyhocks; 2, single dahlias; 3, cactus and double dahlias; 4, pompon



GARDEN FLOWERS—SOME WELL-KNOWN PERENNIALS.

1, Campanulas; 2, Michaelmas Daisies; 3, Snapdragon; 4, Everlasting Pea; 5, Lily of the Valley; 6, Cowslips; 7, Auriculas; 8, Polyanthus; 9, Pansies.

dahlias; 5, everlastings; 6, asters; 7, heliotrope; 8, ivy-leaved geraniums (dark-green leaves); 9, white lobelia.

Flowers for Shady Places.—In shady places, ferns, foxgloves, primroses, lily of the valley, pansies, ladies' slippers, London pride, Christmas-roses, and auriculas grow well. London Pride, Forget-me-not, and Twin-flowered Narcissus are especially suitable for growing under large trees.

Flowers for Sunny Places.—Violets require a south aspect with much sunshine, if winter flowers are wanted; they should have a west aspect for later blooms. Flowers that do best in plenty of sunshine are wallflowers, phlox, fuchsias, stocks, balsams, sunflowers.

Useful Plants.—Useful plants which will flourish almost anywhere are sweet-williams, poppies, nasturtiums, columbines, coreopsis, aconites, and most of the tall plants. Plants suitable for growing in clumps and filling up odd places are snap-dragons, foxgloves, gladiolus, Canterbury bells, single hollyhocks, iris, phlox, and the tall white, red, and orange lilies.

Where there are large spreading trees on lawns or grass-covered spaces, as in some of our old gardens, an exceedingly pretty effect may be obtained by planting narcissi, snowdrops, and crocuses haphazard, as it were, among the grass.

Some Less-known Beauties.—There are some flowers very little grown, which on account of their beauty certainly deserve a wider popularity. Of these *Dielytra spectabilis* (the "bleeding heart" of the northern counties) well repays the grower, its pale-green foliage and rose-coloured heart-shaped flowers rendering it an object of considerable beauty. It will thrive in any moderately good ground, in a not too shady spot. Love-in-a-mist, with its delicate azure-blue flowers and fern-like foliage, is another beauty comparatively seldom met with. It requires good ground and a warm aspect to reach perfection. The deep-blue gentian (*Gentiana acaulis*) must be grown in a very sunny situation; it makes a brilliant and uncommon border. The fritillaries also should not be neglected. (See fig. 194).

Flowers for Smoky Atmospheres.—In small town gardens it is often difficult to know what flowers to choose. Stocks, pinks, pyrethrums, phloxes, antirrhinums, penstemons, delphiniums, aubretias, and columbines can all be grown successfully even in a smoky atmosphere where the more delicate plants would have no chance.

Carpet-bedding.—Is there no place in the modern garden for carpet-bedding? There is one situation where it looks very effective indeed, and that is in raised beds on a lawn. A neat geometrical pattern should be first planned, and the colours selected to form strong contrasts by arranging together a few of the plants available for the purpose. Then the work of planting may be begun, only the smallest and most compact flowers being used, and these set closely together to cover the ground. Finally, the edge of the bed should be smoothed up with the back of a wet spade, much in the manner that plasterers adopt when setting cement. A narrow running border also looks well at the edge of a lawn. For breaking up the monotony of a broad stretch of green, carpet-bedding is an admirable style

of gardening, though for general purposes mixed borders are to be preferred.

A Rockery.—The construction of a rockery requires both taste and care. If odd stones from a quarry are easily obtained they alone should be used, but if the boles of felled trees can be had more easily a natural and picturesque arrangement can be made with them.

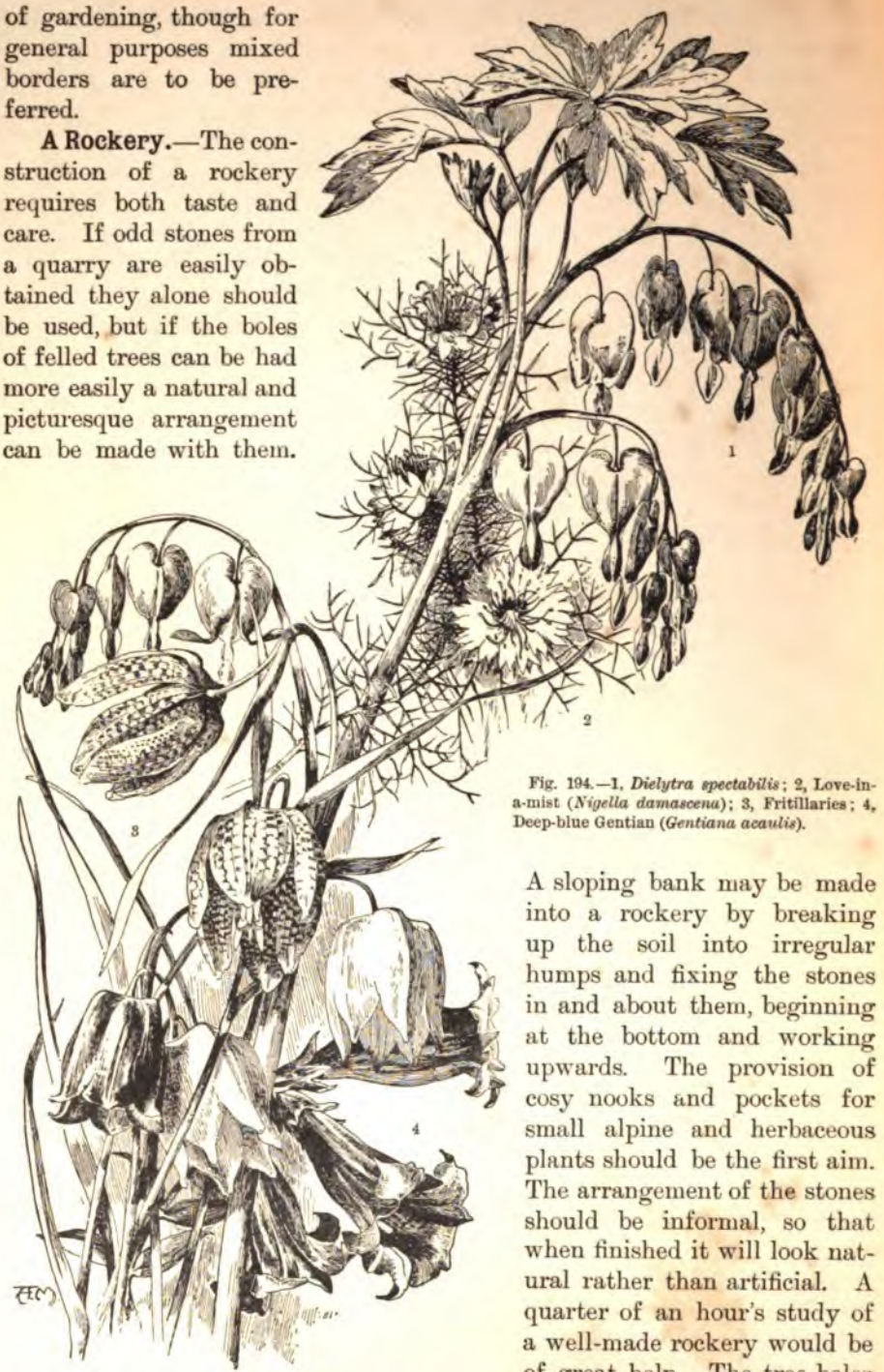


Fig. 194.—1, *Dielytra spectabilis*; 2, Love-in-a-mist (*Nigella damascena*); 3, Fritillaries; 4, Deep-blue Gentian (*Gentiana acaulis*).

A sloping bank may be made into a rockery by breaking up the soil into irregular humps and fixing the stones in and about them, beginning at the bottom and working upwards. The provision of cosy nooks and pockets for small alpine and herbaceous plants should be the first aim. The arrangement of the stones should be informal, so that when finished it will look natural rather than artificial. A quarter of an hour's study of a well-made rockery would be of great help. The tree-boles should be placed roots upwards, and arranged so as to avoid a stiff or

formal effect. By planting ground-ivy or the small-leaved ampelopsis here and there about them a nice effect is soon produced. Rockeries afford excellent positions for ferns. A heap of soil with pieces of brick or clinker stuck upon it is not a rockery, nor is it a suitable place for any plant, except Irish ivy to cover it as quickly as possible.

Rockery Plants.—Creeping-jenny, London Pride (excellent for shady places), stone-crop, cerastium, Christmas-roses, Alpine Rockwort, snowdrops,



Fig. 195.—A Rockery.

Linaria alpina, Winter Aconite, double daisies, Alpine auriculas, crocuses, are all very suitable for a rockery. Among ferns, *Polypodium vulgare*, *Blechnum spicant*, *Lastrea Filix-mas*, *Lastrea dilatata*, *Polystichum aculeatum*, *Cystopteris fragilis*, *Athyrium Filix-fœmina*, and *Scolopendrium vulgare* are all hardy. All kinds of mosses and small-leaved ivy may be grown too.

Bulbs and Tubers.—Snowdrops and crocuses are the earliest plants to flower out of doors, but from their season onward there may be a succession of bulbs in bloom in something like the following order:—Anemone, daffodil, hyacinth, jonquil, narcissus, scilla, tulip, peony, lily, gladiolus, iris, and tuberose. The dahlia is also a tuberous plant, but should be

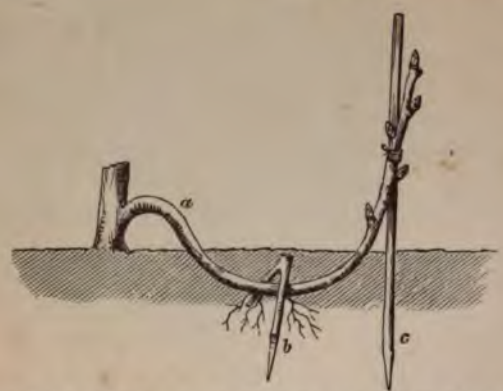


Fig. 196.—Layering. *a*, Side-shoot bent into the ground, kept in position by hooked peg *b*; *c*, stick to hold shoot in an upright position.

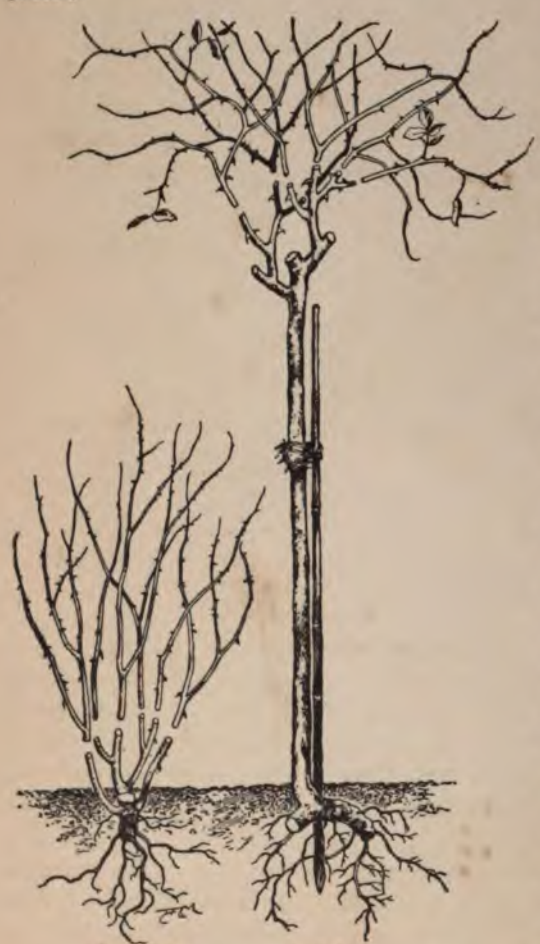


Fig. 197.—Correct method of Pruning for Hybrid Perpetual Roses.

started in heat in May and must not be exposed to frost. The rest are hardy, and though all the better for being raised after flowering when the leaves have withered, they may be left where they grow, and thus treated will increase and form large masses of bloom. Bulbs, as a rule, prefer a light soil; heavy wet land is fatal to most. They should be planted between October and March, according to their season for flowering.

Pinks and Carnations.—The carnation has been well termed the florist's pride, and the flower is so beautiful that every one should grow a few plants at least. Layering is the usual method of propagation. In July and August a side-shoot is trimmed with a sharp knife and then cut half through. It is then pegged into soft sandy ground, where it soon roots, after which the layer can be separated from the stock. Carnations are divided into selfs, flakes, and bizarres. Selfs are, of course, of one colour. Flakes are striped with one colour, and bizarres are marked with several colours. Here are a few of the best kinds to grow:—Goldfinder (sulphur, striped), Terra-cotta (edged pink), Pride of Penshurst (yellow), Bride (white), Raby Castle (salmon, serrated), Souvenir de la Malmaison (flesh-colour), Uriah Pike (crimson). Picotees have the margins of the petals coloured.

Roses.—The soil for roses should be prepared and fairly rich, but not too full of dung or manure. They may be grown as bushes on their own roots, or budded on brier, as standards budded or grafted on the brier in the manner already described for fruit-trees, or as climbers. Probably the last method gives the most flowers, the standard the most enjoyable flowers, and the bush system the least trouble. Pruning should be performed in the spring; it retards the growth a little, which, in our climate, is generally an advantage, for frost is very apt to injure the young shoots. Vigorous shoots may be trimmed back to two or three eyes, but if they are weakly not more than one should be left on each. The general directions given for pruning fruit-trees are equally applicable here. Tea-roses require very little pruning, but hybrid perpetuals should be cut back hard every spring.

Roses may be propagated by means of cuttings, or by budding, grafting, or layering. Cuttings are taken in August, and should be of the current year's ripened growth. They should be firmly potted in light sandy soil. They may then be put in a cold frame and shaded till they show signs of rooting, when they may be placed either in a heated frame or on a shelf in a warm greenhouse. In the latter case, when they are well rooted they should be returned to the cold pit, potted separately, and in the spring planted out.

12 Good Climbers.	*12 Good Hybrid Perpetuals.*	*12 Good Teas and Noisettes.*
Maréchal Niel (under glass).	Anna Alexieff.	Fellenberg.
Gloire de Dijon.	Baron A. de Rothschild.	Reine Victoria.
Félicité Perpetuelle.	Beauty of Waltham.	Blairie II.
Banksian (evergreen).	Charles Margottin.	Saffrano.
Cheshunt Hybrid.	Duchess of Connaught.	Souvenir d'un Ami.
Ophirie.	General Jacqueminot.	Comtesse de Nadaillac.
Aimée Vibert.	Glory of Cheshunt.	Camoens.
W. A. Richardson.	La France.	Marie von Houtte.
Madame Falcot.	Mrs. John Laing.	Kaiserin Augusta.
Rêve d'Or.	La Reine.	Comtesse R. du Parc.
Crimson Rambler.	Paul Neron.	Vicountess Folkestone.
Carmine Pillar.	Pride of Waltham.	Anna Olivier.

Chrysanthemums.—The amateur has made the chrysanthemum his own, and certainly he could have chosen no plant more suitable for specializing. It is very easy to strike. Cuttings may be inserted from November till March, and are taken from the young shoots that spring up from the roots of the parent. If slanted each in a small pot, and then in a hand-light or cold frame half-filled with light mould and covered with a piece of glass, they rapidly strike root. The young plants should be repotted in April into 4-inch pots. By the beginning of June they may be hardened out of doors. They want a good deal of water, and the soil must never be allowed to get dry. Early in July they may be finally potted into large pots, and should be staked and firmly tied, and as soon as the buds are formed they may be liberally supplied with soot-water, cow-dung and water, or

other stimulant. This is the time for disbudding, if show flowers are desired. Not more than one bud must be left on a branch, and not more than three or four at the most on one plant if the blooms are to come to perfection. At the beginning of October or before the fruit comes the chrysanthemums should be taken into the house. They must not be crowded, and should be allowed plenty of air. They do not require more heat than is sufficient to keep the frost away. After flowering, the old stalks should be cut down.

Chrysanthemums may also be grown out of doors. The roots should be divided in the spring and the stalks cut away after flowering. Of course, grown in this way the blooms are much smaller but more plentiful. Really good flowers may be grown on plants trained against a south wall. Chrysanthemums like a strong loamy soil, a compost of loam (2 parts) and half mould (1 part) being excellent.

Flowering Trees.—When there is ample space or a background to fill up, flowering trees are worth attention. Hawthorn (white and red), horse-chestnut, lilac, laburnum, and mountain-ash will grow almost anywhere, even in smoky air. The common dark-green holly also thrives in any soil and place, but the variegated sorts need sheltered positions. *Magnolia Yulan* does best in a warm spot. The flowering currant grows well in damp places. The strawberry-tree (*Arbutus Unedo*) grows best by the sea-side and where there is much lime in the soil. Catalpa, almond, *Pyrus floribunda* and *P. spectabilis*, robinias (acacias), and alders also deserve a place.

Among shrubs, in addition to those already mentioned the following should be noted:—Portugal Laurel, cotoneasters, brooms, including *Cytisus andreanus*, magnolias, althæas, heaths, azaleas, flowering currant and hydrangeas.

Perennial Creepers and Climbers.—*Ampelopsis Veitchii* is by far the best climber for planting to run rapidly over a building and train itself. Virginian creeper is beautiful in autumn, but requires training. For an east or north wall plant, *Jasminum nudiflorum*, cotoneaster, *Pyrus japonica*, escallonia, *Cratægus pyracantha*, and the hardier varieties of the clematis may be recommended; while on the south or west aspect, magnolia, wistaria, passion-flower, many varieties of clematis and honeysuckle, and white and yellow jasmine grow and flower freely. *Solanum jasminoides* is a beautiful creeper for a south wall, but requires much care, as it is apt to suffer in a severe winter, and the same may be said of *Fremontia californica*. Roses are, of course, most beautiful for this purpose. Against a south wall plant Maréchal Niel, Gloire de Dijon, Cheshunt Hybrid, Devoniensis, and Noisettes; against a north-west, Dundee Rambler and Félicité Perpetuelle; and against an east, Gloire de Dijon and Cheshunt Hybrid. It must be borne in mind, however, that roses will not grow everywhere, and in smoky places and some of the suburbs of London it is advisable not to attempt their culture.

THE SUBURBAN GARDEN.

The dweller in the suburbs of London, or of any other large town, cannot expect to grow every one of the beautiful flowers that he admires in the gardens of his more fortunate country cousin, a smoky atmosphere and heavy soil being fatal to the growth of the more delicate blossoms; still, much can be accomplished even under such conditions, with careful selection and good cultivation.

A Garden of Annuals.—Where expense and time are serious considerations, a garden of annuals has much to recommend it. But two things must be borne in mind as necessary to ensure success—good seeds, and thin sowing or severe thinning. Hardy annuals may be sown in position at any time between February and September, but March and April are the sowing months for the production of summer display. Half-hardy annuals, *i.e.* stocks, asters, ageratum, lobelia, &c., should be sown in March in a frame, on a gentle bottom heat if possible, and planted in bed or border in June. The following are the best for general use:—

Front Row.	*Second Row.*	*Third Row.*
Ageratum.	Adonis.	Amaranthus.
Alyssum.	Alonsoa.	Argemone.
Aster (summer).	Bartonia.	Helianthus (sunflower).
Candytuft.	Calendula.	Impatiens glandulifera.
Convolvulus minor.	Calliopsis.	Lavatera trimestris.
Dianthus chinensis Heddewigii.	Centaurea.	Nasturtium, tall.
Eschscholtzia.	Chrysanth. carinatum.	Ricinus (castor-oil).
Gaillardia.	Clarkia.	Salpiglossis.
Gilia.	Helichrysum.	Sweet-pea.
Godetia.	Larkspur.	Zea Mays (Indian corn).
Lobelia.	Linaria.	
Mignonette.	Linum rubrum.	
Mimulus.	Lupin.	
Nasturtium, dwarf.	Marigold.	
Nemophila.	Poppies.	
Phacelia.	Rhodanthe.	
Phlox Drummondii.	Rudbeckia.	
	Silene pendula.	
	Stocks.	
	Zinnia.	

Permanent Gardens.—If a more permanent garden be desired, the old-fashioned perennials described in a previous section are the best. Beds of them can easily be grown in a suburban garden, as most of them are of hardy growth. Bulbs and tuberous plants are included in the perennials.

To Hide Wooden Walls.—The unsightly high wooden palings which serve as a division between so many town gardens may easily be covered by climbing annuals, such as nasturtiums, canariensis, or *Convolvulus major*; even scarlet-runners may perform good service in this way. But to cover the board permanently is a more difficult matter, as Virginian and

other creepers do not cling readily to a wooden wall, and it becomes almost a necessity to have a trellis-work placed against the wood if a permanent screen of creeper is wished for. The Virginian creeper and *Ampelopsis Veitchii* will then grow well if a little care is bestowed upon them, but the clematis is not so successful, though the common honeysuckle and the Japanese variety may be tried. If the boundaries are of brick or stone the task is easier, and a list of suitable plants for covering them will be found in the section on creepers and climbers. Ivy is the best of all permanent coverings for such positions.

Wire Arches.—Wire arches, when covered with creepers, are very effective. One of the best positions for them is at the opening from the flower into the vegetable garden. Covered with clematis, nasturtium, Canary-creeper, hop, or Morning Glory, they add much to the beauty, diversity, and even to the apparent space of the garden.

Garden Banks.—The usual form of a suburban garden is an oblong stretch of grass, with a path round it, a border bed, and at the end of the garden a bank. A charming feature can be made by planting the bank with ferns, foxgloves, primroses, iris, and similar flowers. Some hardy ferns useful for this purpose are the Common Polypody, Hart's-tongue Fern, and the Lady Fern.

Screens.—It is often necessary in a small garden to hide an unsightly corner or shut out an ugly view. For this the giant polygonums are highly to be commended. They grow to a height of from 8 to 12 feet, require no care, and form a most effectual summer screen.

Evergreens.—Some evergreens that will flourish in any soil and atmosphere should certainly find a place in the town garden. Evergreen Oak, box, aucubas, holly, yew, and the hardy hybrid rhododendrons are all suitable, while privet, with its pretty sweet-smelling white flowers, makes an ideal hedge if one is needed. As a hardy evergreen edging for beds, *Erica carnea* is exceedingly useful.

WINDOW GARDENING.

Few persons are content with the once familiar green-painted box, with its miserable evergreens. Its appearance was not beautiful, and was certainly unnatural. The first step towards artistic window decoration was the substitution of Virginian cork for the green paint, and it was a step in the right direction. Where a house is covered with a bright-green creeper such as *Ampelopsis Veitchii* the upper windows may well be fitted with frames covered with cork; but instead of boxes of earth, pots are preferable, they can so readily be changed as the flowers go off. To blend harmoniously with the creeper, pots of nasturtiums, Canary-creeper, ivy-leaved geranium, toad-flax, or *Saxifraga sarmentosa* should be used according to their season, the last-named being useful when the more ephemeral

varieties have died down. All these plants are trailers. Behind them may come pots of geraniums, fuchsias, and marguerites, but it is useless to try to grow delicate succulent plants where the sun beats fiercely on the south side of the house. On the north side, only ferns and the hardiest plants should be attempted. Musks and giant mignonette can be tried anywhere.

On the lower stories something more elaborate will probably be aimed at. What is done must, however, to a large extent depend on the shape of the window itself. A plain flat window does not offer much scope. A stand in tiers may be arranged behind it, and pots placed thereon, with a basket suspended from above containing a few trailing plants. A bay or bow window offers much more scope for decoration. Outside, one is sometimes fortunate enough to have a balcony or embrasure, and then the window garden can be made really effective.

Window Boxes.—In the case of an ordinary window, a frame to fit it must be firmly fixed, and ornamented with cork outside. The bottom should be raised from the sill to allow the water to escape freely. On either side a small trellis should be fastened to the wall. At the foot of the trellis plant creepers and train them up. Along the front of the box, pots of creepers and trailers must be arranged to fall over the cork. Behind these come the ordinary flowers in their season. From the centre of the arch overhead suspend a basket filled with trailing plants. An excellent effect is produced by trailing tropæolum in front, and by planting mignonette, pink geraniums, and marguerites in the box, and *Campanula isophylla* in the basket, none of them being difficult to grow. For the trellis, Japanese honeysuckle is very suitable.

A Balcony.—With a balcony the row of creepers should come first, and of these some must fall and others climb the balustrades. At either end tall pot plants should be grouped so as to hide the boxes. In a warm aspect the blue agapanthus is well adapted for this purpose, while chrysanthemums can be used later.

Soil for Window Boxes.—The soil is an important point to consider. Too many persons use the first that comes to hand, and think by the addition of plenty of manure to make up for the original poverty of the compost. This is a fatal mistake. The best soil should be obtained, for plants growing in so small a space need all the nourishment they can get. A good compost can be made of loam, a little well-rotted manure, and sand.

Give the boxes or pots ample drainage. In exposed positions endeavour as far as possible to shelter the plants from the hot sun, or they will soon be dried up. In any case they will require frequent watering.

Flowers for Window Boxes.—The following are suitable plants to grow:—

For spring: snowdrops, crocuses, hyacinths, tulips, narcissus, and scillas.

For summer and autumn: calceolarias, fuchsias, geraniums, petunias, musk, mignonette, lobelia, marguerite, asters, ten-week stock, heliotrope, pelargoniums.

For winter: euonymus, cupressus, variegated ivy, box, and aucubas.

These hardy shrubs will occupy the box until the snowdrops and hyacinths appear again.

For baskets, *Saxifraga sarmentosa* is the most suitable perhaps, though ivy-leaved geraniums, petunias, musk, *Campanula isophylla* or *fragilis* (cottager's bell-flower), nasturtiums, Creeping-jenny, and Canary-creeper are charming trailers for baskets or to trail down or climb. A small wire arch could be fixed with each end in the window box, and the creepers trained over it. Of course these are summer flowers; ivy or periwinkle should be substituted when severe weather comes. Of ferns, the Common Polypody and the Hart's-tongue are as hardy as any.

Indoor Gardening.—A stand to fit the window is the first essential for indoor gardening. These stands are not cheap; and, of course, they must be lined with zinc, and be water-tight.

If the frost can be kept out and an even temperature maintained, much the same plants may be grown in a window as in a greenhouse. Some of the best are clematis, maurandya, cobæa, roses, amaranths, carnations, begonias, phyllocactus crassula, coleus, fuchsias, azaleas, ice-plant, tradescantia, and pelargoniums.

Where the constant care of flowering plants cannot be undertaken, the window fernery supplies a very pleasing feature in a room. The edges of the box (which must be on a stand and roofed over with glass) should be 8 or 9 inches high; a zinc lining, perforated for drainage, must be provided, and the box filled with rather light turfy mould, mixed with a little charcoal and sand. The ferns must be kept well watered, and the case left open an inch or so every morning to admit the air. Any of the following ferns are suitable:—*Adiantum capillus-veneris, Asplenium alatum* and *viviparum, Davallia bullata, Lomaria gibba, Nephrodium molle, Polypodium pectinatum,* and *Pteris cretica* and *serrulata.* If the room is lighted with gas, maidenhair ferns are not likely to do well, and it must never be forgotten that draughts are fatal to most plants.

THE GREENHOUSE.

There is a wonderful fascination about a "bit of glass"; no one who has taken to gardening at all seriously can have escaped it. To grow something out of its season, to raise delicate plants, to keep roots and cuttings through the winter, and to grow a few grapes, are objects for which every amateur strives. Now there are greenhouses and greenhouses—from the lordly palm-house, such as that at Kew, to the home-made structure, heated by an oil-lamp, that one sees on allotment fields; from the stove-house, with its moist warmth that renders breathing difficult, to the cool-house used only for storing hardy plants. In these pages an ordinary small greenhouse, with simple heating arrangements for keeping alive the commoner kinds of plants, will principally be kept in view. The span-

roofed house that is built partly in the ground, and runs east and west, is the best for forcing, as it gets all the sun possible. A "lean-to" set up against a wall is more suitable for vines and trained fruit. The latter is, of course, the cheaper of the two. This is its chief recommendation, though nurserymen often have one or two "lean-to" houses on the north side of a wall in which to keep back any plants that are wanted later. Both kinds can be bought very cheaply in parts, which anyone with a little knowledge of carpentering can easily put together. Whether "lean-to" or span, the house should not be sunk deeply in the ground; any slight gain in heat is more than counterbalanced by the damp and lack of front light.

Heating.—For heating, it is best to buy a saddle-back boiler and hot-water pipes, and to have them fitted in the house; then, if the pipes are kept full and a good fire banked up on cold nights, there is no need to worry about frost. If this is too costly, a tortoise slow-combustion stove is not a bad substitute, but the utmost care must be taken that the chimney piping does not leak. A patent top should be fitted to the chimney to prevent a back draught. In a small house an oil-stove acts fairly well if kept very clean and properly trimmed. But in the case of both these stoves bowls of water should be placed on the top for the purpose of keeping the air moist and absorbing noxious fumes.

One point is worth noting in fixing the hot-water pipes. Always see that they have an upward slope from the boiler, for the tendency of water, when heated, is to rise, and if the highest part of the pipes is close to the boiler the circulation is bound to be defective. There ought also to be an escape-pipe for the steam; without one, there is always the risk of an explosion.

If a night temperature of 40° is maintained—which can be done with a little house at small cost—seeds can be raised, cuttings rooted, and ferns and flowers grown all the year round. It is even possible to grow grapes and to force strawberries.

Ventilation.—Small plant-houses are apt to be improperly ventilated, with the result that the temperature and atmospheric moisture vary extremely. This is most unhealthy for plants. Bottom ventilation should be used by preference, the top or roof ventilators being necessary only when the temperature cannot otherwise be kept down.

Cuttings.—Cuttings of geraniums, pelargoniums, &c., should be taken from the well-ripened new wood, just below a joint, in August, or as early as possible in spring from plants grown under glass. In the former case they must be planted in boxes about 3 inches deep and 2½ feet long, filled with a mixture of loam, sand, and either leaf-mould or partly-decayed manure. The cuttings when inserted in the soil should be well watered and then placed in the open air for a time, but before the first frost they should be moved into the greenhouse. It is important to keep them only just moist, not sodden, and the leaves should not be wetted. Calceolarias are struck in the same way as geraniums, but not until September.

Verbenas, heliotropes, fuchsias, and some others, are generally struck in pots in spring. The cuttings should be planted in sandy soil, and placed on a shelf near the roof glass. The four Violas and pansies should be planted in a cold frame or hand-light in autumn, and kept close till rooted.

Lobelias require a good soil and slight heat. Pyrethrums should have very sandy soil, and should be placed in a frame and shaded from the sun. Golden Feather is propagated in the same manner as geraniums.

Greenhouse Plants.—The following is a brief list of the most suitable plants to grow in a small greenhouse:—

American aloes are very healthy plants and give little trouble, as they need not be repotted for years. They require only a top-dressing of fresh loam, with a sprinkling of bone-dust or charcoal, every year.

Arum lilies should be planted in soil composed of loam and manure, mixed in the proportion of two to one. They are the better for frequent syringing and require plenty of water.

Aspidistras are very useful for decoration, because they will thrive almost anywhere, even in a sunless room. The roots should be divided occasionally, or else the plants should be moved into larger pots in the spring

Asparagus plumosus nanus is a most graceful foliage plant, excellent for cutting, as the sprays last much longer than maidenhair fern. Soil: 2 parts loam, 1 part peat, 1 leaf-mould, with a fair addition of silver sand. Water liberally except in the winter, when the roots should be kept nearly dry. Give an occasional dose of liquid manure.

Azaleas require plenty of water, and the soil in the pots should always be kept very firm. For flowering, place them at first in a northern aspect, and afterwards remove them to a warmer spot and syringe twice daily. Pot in good peat and sand. Shade in very hot weather. From August to the end of September they may be placed in the open air to ripen.

Begonia tubers should be potted in a mixture of loam 2 parts, leaf-mould 1 part, and well-decayed manure 1 part, with a liberal addition of silver sand. Place the pots in a cold frame, water very little till they are growing well and then more freely, and give an occasional dose of weak liquid manure. When they are coming into bloom, place them in the greenhouse. With a little care a succession of begonias in bloom may be had during six months of the year. To get them in flower early they should be started in heat in March.

Cacti require plenty of light and sun. Water freely in summer, very little in autumn and spring, and scarcely at all in winter. Grow in small pots and see that the drainage is good. Soil: 6 parts loam, 1 charcoal, 1 sand, 1 brick rubble.

Tree carnations should have a warm position and plenty of water, but not so much as to make them sodden. The more air they get the better.

Cinerarias do best in a cool place close to the glass until they come into bloom; they should be shaded from the sun in spring and summer. Be careful about watering, extremes of dryness or moisture being fatal. Ventilate well, and give an occasional dose of liquid manure. As they are

very susceptible to attacks of green-fly, the house should be fumigated occasionally.

Cytisus (Genista) should be kept moderately moist at all times. Pinch back the shoots after flowering. Keep the plants in a cool position, and ventilate freely.

Deutzias need attention after they have finished blooming. Useless wood must be cut away, the soil loosened, and a top-dressing given of loam and bone-meal. They are best in the open air in summer. Water well, give liquid manure occasionally, keep in a cool place in winter, and increase the heat gradually until the bloom shows.

Ferns, such as adiantums, aspleniums, davallias, and selaginellas, will all grow well in an ordinary greenhouse if they are placed in a sheltered position, watered freely, and allowed to stand on a damp shelf in summer.

Ficus does well in a warm moist house, if well watered and protected from draught. Sponge the leaves occasionally.

Gloxinias when flowering must be watered freely, and the temperature should not be lower than 55° or 60°. When they cease blooming place them on a cool shelf and give just enough water to prevent their flagging. When the leaves have quite faded cut them off, and keep the pots in a dark place at a temperature of 45°.

Hoya carnosa is a lovely plant when grown in a pot, and trained on the back wall of the house, or up a pillar. It thrives well in the shade, and needs only a moderate degree of heat.

Hydrangeas are much improved by an occasional application of soot-water. Keep them in a sunny position and ventilate freely. Winter in a cold frame and repot in spring. Place them out-of-doors in full sunshine during summer. When properly treated the plants are covered with flowers, which last for a long time.

Hyacinths should be planted in well-drained 5-inch pots, containing the same soil as for begonias. Press firmly down, leaving the neck of the bulb above the surface. Stand the pots on a layer of ashes in the open air, cover them with cocoa-nut fibre or cinders, and when the shoots are about an inch long remove them to the greenhouse, very gradually accustoming them to light. Then place them on a shelf near the glass. Water them very little until they are placed in the greenhouse, but afterwards more freely, occasionally with weak liquid manure.

Lily-of-the-valley (under glass), *Lilium auratum*, and *Lilium speciosum* require much the same treatment as hyacinths. *Lilium candidum* should be potted in September or October in rich sandy soil, and placed in a sunny position in a cool house. Do not force them forward too quickly. Treat *Lilium longiflorum* in the same way.

Narcissi (under glass); proceed as for hyacinths.

Pelargoniums should be watered very little from autumn till February, then more freely. Give liquid manure when the flower trusses begin to show. Place them on a shelf about 18 inches from the glass and ventilate freely.

Plumbago should be kept rather dry in winter, and repotted in spring in loam and decayed leaf-mould. Water freely in summer.

Roses, such as Maréchal Niel, when grown in a greenhouse are usually planted in an outside border, the stem being passed through a hole in the wall, which should be stuffed with hay in winter to prevent the frost from entering. Suitable soil for roses is composed of good loam with a small quantity of soot and bone-dust. The roots should never be allowed to become dry. During the period of growth roses should be syringed twice daily. Manuring is only necessary if the soil in the border is exhausted, when a top-dressing of artificial manure or the application of liquid manure is advisable. Maréchal Niel is certainly the best kind to grow indoors.

Cucumbers.—After the bedding plants have been cleared out in the early summer, cucumbers may take their place. The seeds should be sown

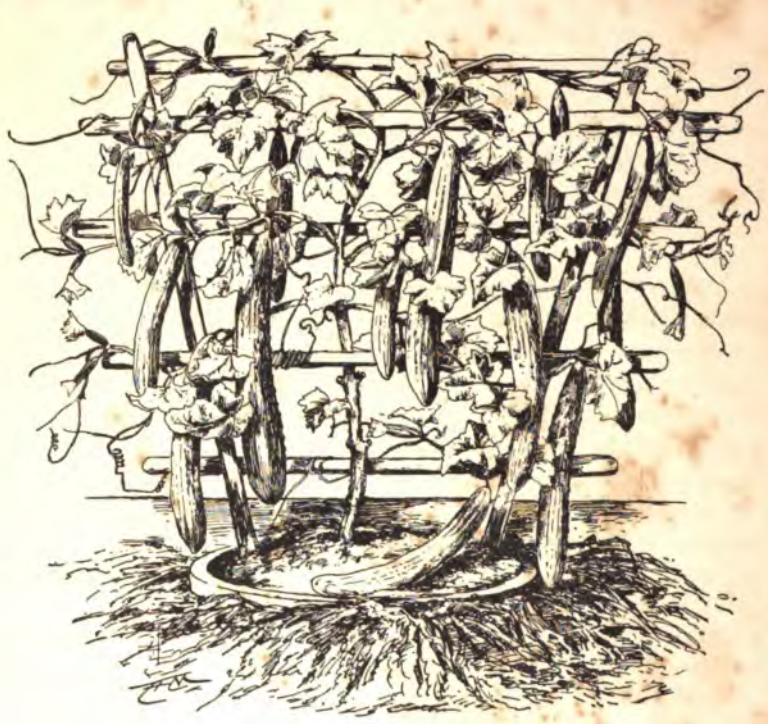


Fig. 198.—Framework for training Cucumbers

in heat about the end of February, and by the time the house is ready for them will have become good strong plants. They should be potted in large boxes or pots, with plenty of drainage and a layer of chopped turf above it. The soil should consist of loam and manure. The best way to procure it is to make up in the autumn a heap of alternate layers of turf and manure. This heap by the springtime will be mellow and ready to be cut down for potting. Place the ball of the plant in the centre of the pot and press the mould lightly round it, being careful not

to bruise the fibrous roots. At first the soil should not more than half-fill the pot, but more should be added by degrees.

The illustration (fig. 198) shows how the plant should be trained, but where there is a trellis or wire in the house the runners may be carried up it equally well. The framework illustrated is built up by driving two stakes firmly down the sides of the pot and tying lateral sticks across them. Pinch back the plants at the third joint in order to drive the strength into the fruits. They grow very freely, and by this means a dozen to twenty cucumbers may be obtained from a single plant. Every other watering may be with liquid manure when the plants are established. Keep them always moist, and syringe the leaves well every afternoon about four or five o'clock. In the hottest hours shade is beneficial, as it prevents drooping.

Tomatoes.—Tomatoes differ from cucumbers in that they need a dry air. For this reason the two are best kept separate, an airy sunny house being most suitable for tomatoes. The seed should be sown in heat at the end of January or the beginning of February, and as soon as the seedlings are big enough to handle they must be placed in small pots, and afterwards, as required, in larger ones. At the end of April they can be planted in a border in the house or grown in pots. In either case, after they begin to show bloom they must not be forced or overfed. The difficulty in tomato growing is not in growing big plants but in getting them to fruit. This is best effected by checking them when blooming. Pinch out all lateral shoots as they appear. Train the tomato on a single stem, and wait till the bloom has set before giving either much water or nourishment. Stop the plants altogether after the fourth bunch of fruit and then feed freely, but do not water the leaves. They may be very successfully grown in a sheltered border in the open by following the same cultural directions, except that they should not be planted out before June 1st, and should be stopped at three bunches. If all the fruit is not ripe by autumn, it will nevertheless ripen and colour well if kept on a dry shelf, but on no account must it be exposed to frost. In case of disease burn all the haulm. Tomatoes and potatoes should not follow one another, being similar plants; either do well after celery.

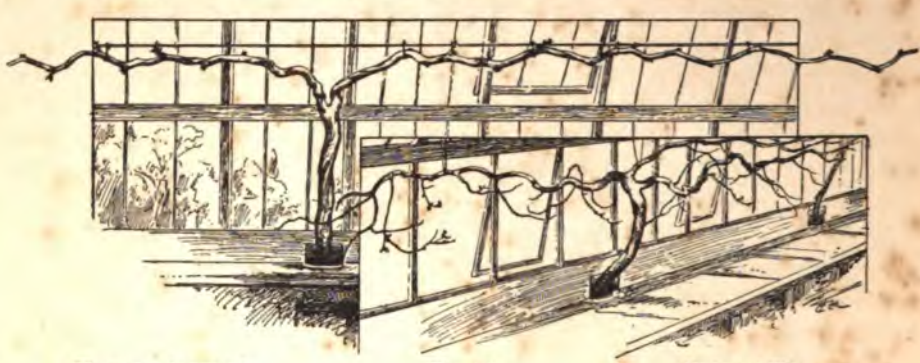
Rhubarb, Forced.—About the second week in November the roots to be forced should be planted in boxes containing rich soil and placed on the greenhouse pipes. They must be kept in a dark spot, and covered so that they can be easily syringed. With plenty of water and heat, rhubarb may generally be had about three weeks after forcing is commenced.

Strawberries, Forced.—In July runners must be taken and placed in 3-inch pots, filled with turfy loam, decayed manure, and a little bone-meal and soot. Plant them firmly and ram down the soil, water regularly, and as soon as the roots fill the pots turn the young plants out into 6-inch pots for fruiting. Water well twice a day in hot weather, and stand the pots on ashes in the full sun to ripen the crowns. In the autumn plunge them up to the rims in ashes for the winter, and bring them into the house early in February and place them on a shelf near the glass. Water freely, and give

liquid manure twice a week when the flowers show. Fruit may be looked for early in May. Sir Joseph Paxton and Keen's Seedling are good standard varieties to grow.

Vines.—Grapes can be grown either in the greenhouse, or against a warm wall out of doors. But it is important to get the kind most suitable for the special purpose. An attempt, for instance, to grow Muscatel grapes in an ordinary "lean-to" would probably result in failure. For that purpose the best sorts are Black Hamburg and Sweet-water.

The roots should be planted in an outside border and the stem brought inside the greenhouse. Water freely, but do not make the ground too



Vine properly pruned. Fig. 199. Neglected Vine.

moist. Occasionally give liquid manure composed of ½ oz. of Peruvian guano dissolved in a gallon of water, especially after the grapes swell and change colour; but as it is a strong manure it must be used sparingly.

Pruning (fig. 199) is important, and should mainly be done in the autumn; if it is delayed till spring, when the vines are full of sap, they are likely to bleed. Two stems are enough for each plant; the length must depend on the amount of roof space. If one of them shows signs of exhaustion, another should be trained up to take its place, the old stem being cut away when the new one is strong enough to bear. When pruning, shorten all laterals, leaving only three or four buds. Thin out the shoots that start in the spring, selecting for growth one on each spur, and stop it after the first bunch. The bunches also will need much thinning if the grapes are to swell properly, and any that attain a considerable size should be supported by ties of raffia. Sunshine and plenty of air are essential to proper colouring.

Syringing should be done frequently. It is also advisable that the vines should be thoroughly painted with strong soap-suds when all the leaves have fallen. If a small quantity of sulphur is added to the water it will destroy any larvæ of insects.

Mildew, the commonest disease among vines, is usually the result of defective ventilation. Sulphur is the best cure. It can be either dusted over the leaves, or sprinkled on the hot-water pipes. This operation requires caution.

In case of an attack of green-fly, fumigation will be necessary. The simplest method is as follows:—Obtain an ordinary old tin bucket and make a few holes in the bottom and sides for draught. Into this place a few red-hot coke-cinders and upon them a loose layer of tobacco-paper. Keep on adding paper and inducing it to smoke freely until the house is so full that the path cannot be seen when the operator stands upright. Syringe heavily the following morning. It is absolutely essential to see that the tobacco-paper does not flare, otherwise it will injure the foliage.

Plants that require more Heat.—If there is a second greenhouse available, where the temperature can be kept much higher than in the useful house, many flowers can be grown that could not be successfully cultivated in the cooler atmosphere. To mention but a few, there are stephanotis, bougainvillia, allamanda, and dipladenia as climbers; while gardenias, begonias, poinsettia, gloxinia, eranthemums, hibiscus, sensitive-plant, and amaryllis are beautiful plants that need only ordinary care. Though orchids and palms hardly come within the category of the amateur's possible successes, a few sorts may be grown in the second house. Of the latter, *Latania borbonica, Phœnix reclinata, Areca lutescens,* Kentias, *Seaforthia elegans, Euterpe edulis*; and of the former, *Dendrobium nobile, Cœlogyne cristata,* and *Cypripedium insigne* are the best kinds for an amateur to grow.

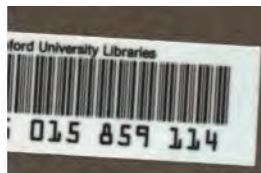
PITS AND HOT-BEDS.

Cold Pits.—Cold pits and frames are most convenient when constructed with hinged lights, the necessity of pulling them on and off being thus avoided. A very effective cold pit may be cheaply constructed by making walls of turf some eighteen inches high and a foot thick, digging out the centre six inches deep, substituting cinders, and finally putting an old light on. This rough-and-ready pit will serve to protect such plants as violets, hydrangeas, calceolarias, and pansies; indeed, if placed in a sheltered position and covered with sacks in frosty weather, it can be used for geraniums and fuchsias, while, with care, even pelargoniums can be kept in it. Such a pit is most useful in spring to harden off plants before setting them out.

Hot-beds.—For heating a pit or frame fermenting material is generally used. Where stable manure is abundant no gardener should be without a hot-bed. In a brick pit the manure is placed at the bottom, and, after the first fierce heat and fumes have passed, is covered with fibre or mould to a depth of three or four inches. Such a pit serves admirably for raising young plants from seed, the pots being inserted in the mould. Making up a hot-bed for a frame is rather different. Equal parts of manure and leaves should be obtained, and the manure thoroughly shaken out and mixed. If it is too dry, add two or three pails of water per barrow-load. At the end of a week or ten days turn over the heap again, and after another three days make up the bed. Build it firmly and squarely, trampling down the manure as tightly as possible, and leaving a margin of 18 inches beyond

the frame each way. Finally, place the frame on the bed, and when the thermometer shows that the heat is beginning to steady, put in the earth. In this frame the heat will, if the bed is properly built, keep up for ten or twelve weeks, by which time the sun will have sufficient power to ripen the cucumbers or melons planted in it. The plants should be set in turfy loam in the centre of the bed, and as they take time to spread there is plenty of space for pots or boxes of seed. The cultural directions for cucumbers in frames are the same as for those in the house, but in the hot-bed the syringe may be used freely, and ventilation given during the day by slightly tilting the lights. If the bed is made in February and seeds are sown at once, cucumbers should be cut by the end of April.




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